

## CASE STUDY

# Advancing Order Fulfillment With Automated Solutions

The Jasco Products omnichannel distribution facility in Oklahoma City fulfills and distributes over 100,000 consumer product orders each day. To improve fulfillment operations, speed and order accuracy, Jasco turned to Burns & McDonnell to develop, design and build its new automated material handling system.



## Challenge

Across the globe, reduced labor availability and increased demand for e-commerce are impacting a wide variety of industries. To help react to these factors, advances in automation are consistently being implemented. Until recently, labor had been relatively abundant and affordable. As a result, fewer than 10% of warehousing operations in the U.S. had considered taking steps to convert operations to highly automated materials handling operations. Today's market realities, however, make cost efficiency, safety improvements and market share retention/capture more important than ever before, driving the need for automation.

Just like many other companies right now, Jasco Products — a home automation, security, entertainment and mobility products company — was feeling the strain of dated and cumbersome fulfillment methods and sought ways to keep deliveries on track for its customers.

## Project Stats

### Client

Jasco Products

### Location

Oklahoma City, Oklahoma

# 60%

REDUCED MANUAL TASKS

# 80

ROBOTIC SHUTTLES

# 100K

CONSUMER PRODUCTS  
FULFILLED PER DAY



More specifically, its Oklahoma City distribution facility required rapid upgrading of core systems as it maintained daily fulfillment tasks. This Jasco location fulfills and distributes over 100,000 consumer products a day, spread across thousands in individual orders. With the existing methodologies in place, an order processor may be required to walk upward of 16 miles a day using traditional pick module and directed floor pallet picking operations. To continue as an innovative force in the industry, and to reduce physically intensive work for its employees, a new strategy was needed to propel the company forward.

## Solution

The Jasco team turned to Burns & McDonnell to create an efficient, lean and highly automated material handling facility.

***“We reviewed many other models at the beginning of the process. But the right-fit solution that Burns & McDonnell was able to offer gave us the most profitable path forward when it comes to return on investment. We actually expect to see a return on the project’s cost within just a few years — a financial return model that is almost unheard of.”***

**JACOB RODRIGUEZ**  
*Jasco’s chief operating officer*

The Burns & McDonnell team studied Jasco’s fulfillment process and ultimately recommended a design-build solution to create a system that worked to limit physical movement and eliminate repetitive actions, waste and errors. To improve order fulfillment, our firm deployed sophisticated picking and sequencing technologies.

The final design solution consists of an inbound carton system used to identify and sort more than 3,500 individual SKUs. It also includes replenishment stations, an automated shuttle storage and retrieval system, pick and pack stations, and self-loading ergonomic palletizers. Overall, the new system incorporates 80 robotic shuttles, 50,000 dynamic storage locations, an advanced warehouse control system, and appropriate conveyance to maximize uptime performance and reliability.

Also critical to the success of the operation was close collaboration with TGW Logistics Group, a global leader in systems integration for automated warehouse solutions. By combining integrated design and construction capabilities with TGW’s product offerings, the joint team was able to deliver a faster, more cost-effective product for Jasco. Collaboration included design, engineering, construction installation, and schedule coordination across all building requirements, such as electrical, structural, fire safety and mechanical systems.

## Results

In the South and across the nation, Burns & McDonnell is designing and constructing sophisticated facilities and infrastructure that help local businesses and communities compete in challenging times.

This facility sets the standard for fulfillment predictability, order accuracy and employee safety. Automated centers like this reduce employee turnover, work-related injuries and exposure to the challenges of an ever-shrinking workforce.

The delivered solution reduces manual tasks by 60% while also reducing costs associated with damaged product or inaccurately fulfilled orders. The project was completed under budget and ahead of schedule.

## About Burns & McDonnell



Burns & McDonnell is a family of companies bringing together an unmatched team of engineers, construction and craft professionals, architects, and more to design and build our critical infrastructure. With an integrated construction and design mindset, we offer full-service capabilities. Founded in 1898 and working from dozens of offices globally, Burns & McDonnell is 100% employee-owned. For more information, visit [burnsmcd.com](https://burnsmcd.com).