

Benchmark Briefing

ASRS for Precision Manufacturer





Automation supports precision manufacturer

High precision machine manufacturer gets a cutting-edge warehouse upgrade

Park Industries in St. Cloud, MN manufactures stone working machines that cut, polish and edge stone into slabs for commercial and home use. Driven partly by the granite/quartz countertop trend, as well as entering the metal cutting industry by introducing CNC plasma machines; Park Industries has experienced rapid growth over the last five years - putting a squeeze on the warehouse - literally.

Previously their warehouse utilized a manual paper picking process with associates pushing picking carts up and down aisles of shelving collecting parts. "It was very messy - the aisles were so crowded with parts it was difficult to maneuver the carts down the aisles, and when the aisle was clear - finding parts was tough," said Elaine Ohman, Inventory Control Manager, "We were bursting at the seams."

Case at a glance

Site
Park Industries, St. Cloud, MN, USA

Application
Order fulfillment & distribution of small parts

Equipment
Four Kardex Shuttles with Kardex Power Pick System inventory management software

Increased
throughput

Doubled
inventory
capacity

Increased
accuracy
to 98%



Polishing up the warehouse

The warehouse today has four Vertical Lift Modules Kardex Shuttle with pick-to-light technology integrated Kardex Power Pick System inventory management software. They installed the automated material handling solution in stages - starting with two Kardex Shuttles, adding a third two years later, and a fourth just recently. Within the same footprint and using the same labor requirements, the warehouse now fulfills twice the number of orders and has doubled inventory capacity.

 [Learn more about the Kardex Power Pick System](#)



4 Kardex Shuttles



Kardex Power Pick System inventory management software



Pick-to-light technology

Warehouse goals

Knowing they needed to expand warehouse efficiencies to support their growth, Park Industries turned to automation. Specifically, they were looking for an automated solution that would meet a set of six criteria they set out at the start of the project. They wanted a solution: 1 – to utilize the vertical height in their facility to create additional capacity; 2 – to deliver parts to the worker automatically to eliminate wasted walk time; 3 – that could be easily expanded to handle future growth; 4 – to integrate and communicate with their current ERP; 5 – to provide easy access to data and reporting; and 6 – that was user friendly. Overall, they were looking for a total solution – a combination of hardware and software – to improve their warehouse fulfillment operations.

Automation – benefits and processes

Supporting customers – and expanding

At the core of Park Industries customer service is their parts policy – boasting over 5,000+ unique machine parts in stock with a next day delivery guarantee. This level of customer commitment requires a highly organized and efficient warehouse behind it. “It’s critical we manage all parts efficiently – fast, medium and slow moving SKUs – when a customer needs it, we have to find it,” said Mark Shankey, Warehouse Supervisor and Training “and it needs to be in clean, usable, working condition.”

When additional inventory is added, the warehouse can handle it without compromising the valuable slow-moving parts that are still important to support older customers. Each Kardex Shuttle was purchased with additional capacity, and when capacity is reached, Park Industries simply adds another unit. “We have introduced five new product lines since installing the first two Kardex Shuttles,” said Ohman, “we couldn’t have done it without this solution – an investment in technology was critical to supporting our growth.”

Inventory accuracy

Cycle counting is a focus in the warehouse. “Previously our inventory accuracy was about 90%,” said Shankey, “now with the Kardex Shuttles and a cycle counting process in place we are at 98% – meaning we know what we have and more importantly where it is.” The warehouse cycle counts every day, counting roughly 15% of their inventory each month to avoid a consuming year-end inventory count.

Ongoing slotting

To improve productivity even further, the warehouse also implemented an inventory slotting strategy. Driven by parts and usage data, they move, or slot parts used to produce the same machine closer to one another. For example, parts for the most popular machine were previously stored across 50 different trays are now stored within 8 trays. This allows the operator to pick and fill orders faster with less time needed for tray delivery.



Order fulfillment

The warehouse receives two types of orders – roughly half are service orders for repair parts to be shipped to customers while the other half are work orders to be delivered to support the production line. Work orders are fulfilled a day ahead of production while service orders are fulfilled on the same day. All orders are entered into the system by the service team through their ERP system– JDE. Orders are automatically pushed into the Kardex Power Pick System inventory management software which drives the fulfillment process within the Kardex Shuttle workzone.

The warehouse operator selects the order(s) they want to fill from the Kardex Power Pick System software and with a click of a button the Kardex Shuttles start to move to deliver parts to the operator. As the Kardex Shuttles present the tray of items for picking, the pick to light technology on the front of the unit directs the operator to the exact location of the pick and indicates the part number and quantity to pick.

The operator confirms the pick at the Kardex Shuttle and turns to place them among the order(s) as indicated on the pick ticket. Completed work orders are delivered to the production cell to be used the next day and completed service orders are sent to the shipping area where they are rechecked, packaged and shipped to the customer.

There are some larger bulk items held in a separate pallet rack zone within the warehouse. When an order requires parts from the pallet rack, these parts are picked and combined with the parts from the Kardex Shuttle zone before the order is delivered to production or shipping.

Getting up to speed

New employees can now be trained in a day or two, making it easier for Park Industries to utilize temporary summer help. "The Kardex Shuttles tell them exactly what to do," said Shankey,

"We don't have to teach new employees manual bin locations – it's much faster."

Mark Shankey, Warehouse Supervisor