

# BENCHMARK BRIEFINGS

**kardex**remstar

## SITE

Saja Burgess  
Bandalia, OH

## APPLICATION

Manufacturing parts distribution

## EQUIPMENT

Four horizontal carousels arranged in two pods, with pick-to-light technology and FastPic® Inventory Management Software

## SUMMARY

Combining automation with lean techniques reduced labor requirements by 40%, recovered 42% floor space with an 18 month ROI



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## Horizontal Carousels Combined with Lean Efforts Improve Stockroom Productivity, Reduce Labor and Increase Accuracy with 18 Month ROI

In today's fast paced manufacturing world; time is money. The right mix of trained workers and required parts to keep the manufacturing floor running is vital to success. Using lean manufacturing initiatives to reduce waste in the manufacturing process can help organizations find the right mix that leads to profit. Saia Burgess, a worldwide motion solutions manufacturer, is continually looking at ways to lean out waste.

Saia Burgess manufactures a wide range of motion control solutions at their Vandalia, Ohio manufacturing facility. Motion control solutions, such as solenoids and switches, are used in a wide range of products globally including: ATMs, security monitoring systems, medical devices and military systems.

### Leaning Towards Efficiency

To keep nine manufacturing departments operating efficiently, Saia Burgess keeps just over 10,000 SKUs on hand, previously stored on shelving. "It became apparent we were doing a lot of very redundant activity through the day," said Tim O'Brien, Materials Manager, "Sometimes going to the same spot 10 or 12 times a day to pick the same part, just for a different work order."

In a lean effort to do more with less, Saia Burgess replaced the stockroom shelving with four Kardex Remstar horizontal carousels

integrated with pick-to-light technology and FastPic inventory management software. Seventy percent of all parts (6,800 SKUs) are stored in the new carousel system, with bulk SKUs remaining in the shelving. "We shrank the number of people required, cycle count accuracy is higher and we are able to pick orders faster and more efficient, it was a very successful lean effort," said O'Brien.

### The Paper Picking Past

Prior to introducing automation into the stockroom, workers had a one to one relationship with an order, each worker focused on picking one order at a time. Pick tickets were generated daily and workers would walk throughout the shelving searching for all the parts they needed to complete the order. When the order was complete, they would deliver it to the correct department and return to the stockroom to pick the next order in the pile of pick tickets. Workers often visited fast moving part locations several times a day, creating redundant activity.

### The Kardex Remstar Solution

Implementing the new automated system changed the way orders were processed. Orders are downloaded from the Material Requirements Planning (MRP) Movex software to the FastPic software.



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The carousel operator initiates up to six orders at a time using software. Each department order is assigned a separate position on the batch station. The carousels then rotate, using pick lights to direct the operator to the exact location of the first pick. The operator picks the quantity indicated by the pick light and turns to the batch station to distribute the parts among the six orders as directed by the put lights. As the operator is distributing the parts from the first pick, the other carousels are rotating to present the next pick, virtually eliminating operator dwell time. This process repeats until the six orders in the batch are filled. Each order is then placed on the cart provided by the department manager.

Any parts required for an order that are physically stored off the carousel are flagged at the beginning of the batch. Another stockroom picker retrieves these parts from the shelving and match them up with the orders on the department carts. All orders are filled and delivered within 24 hours. The stockroom processes an average of 220 orders per week, each averaging about eight lines. A small percentage (about 10%) of orders are shipped directly to customers, with no manufacturing required. These orders are processed in the same way, the cart is simply delivered to the shipping department for shipment directly to the customer.

The previous system required five people to pick orders manually from shelving. The stockroom now requires three people for picking, one to pick from the carousel, one to pick from bulk storage and one to replenish the carousels on second shift. That's a 40% labor savings.

## **Saving Space... and Money**

As well as the labor reduction, Saia Burgess was able to recover floor space and get their parts all back under one roof. Previously, the 7,000 square foot on site stockroom was over capacity, forcing slow moving items to be stored off site in a 1,600 square foot space. All

parts are now stored onsite in a 5,000 square foot automated stock room, saving 42% floor space and eliminating a \$4,000 off site monthly storage charge. Of the 2,000 square feet that was recovered on site, a portion was used to expand manufacturing (value added operations) and a portion was used to expand the shipping department.

## **Hot & Accurate Picking**

In manufacturing environments, hot picks are inevitable and occur when parts are needed in manufacturing immediately due to scrapped or lost pieces. When a manufacturing operator identifies the need for a hot pick, they fill out a materials request form and head to the stockroom. With the push of a button the carousel operator is able to interrupt the batch orders they are picking, retrieve the hot pick for the waiting manufacturing operator and then easily return to picking the batch of orders.

Delivering the right part and the correct quantity to the right place can help to reduce the need for hot picks. "Previously, accuracy rates were below 94%," says Kelly Greene, Distribution Business Unit Manager, "Since the implementation of the carousel and some other key policy changes, our accuracy is just below 99% and we have been able to hold that for the past year."

## **Responsible ROI**

As a responsible manufacturer, Saia Burgess did an extensive ROI analysis before leaning their stockroom operations. Coincidentally, three pickers in the stockroom were planning to retire in the next few months. Not replacing their positions and adding their saved salaries along with the gained efficiencies created an easy ROI. "I got my accounting group involved to make sure we were capturing every penny and not putting anything in the ROI that wasn't true," said O'Brien, "We calculated a payback of eighteen months. Those people have retired and we have not needed to replace them so we've hit our payback."



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