

BENCHMARK REMSTAR

BENCHMARK BRIEFINGS

SITE

Aerial Co.
Marinette, WI

APPLICATION

Order picking and consolidation of professional beauty supplies

EQUIPMENT

8 dual tiered order picking carousels, 2 consolidation carousels, flow rack, pick-to-light, conveyor, RF and software integration

SUMMARY

Automated system to handle slow and medium movers that allows for 50% spikes in demand; same day shipping with 99.2% accuracy and picked orders 3 times faster



Aerial beauty supply DC tames the beasts of demand & performance

Flexible automated distribution center for beauty supply orders provides customers with 24-hour turnaround while increasing picking accuracy over 99% and reducing picking labor by 43%.

Aerial is a wholesale distributor of professional beauty salon products. Located in a 95,000 square foot facility, the company is responsible for its 7,000 SKUs and as many as 1,200 daily orders in the hands of its salon and store customers within 24 hours.

The company is now doing this with an integrated warehouse system of light directed order picking carousels designed and implemented by the Remstar Integrated Systems Solutions Group. The system includes RF directed flow-rack picking and sorting, consolidating (putting) carousels and dedicated United Parcel Service (UPS) trucks stationed in its yard.

Most of the operation is either RF-driven or light-driven at the carousels for order picking purposes. Figures at Aerial show that 90% of the orders flow through the carousels.

Aerial required a flexible distribution system to process the growing volume of sales and the many new manufacturer's products it continually brings in as promotions and standard product.

Production Manager, Heather Nelson, remarked, "We did this for future growth and to service our customers better. When we develop new territories and add new product lines we need to have the capacity and capabilities to support our growth."

"We were also able to reduce our personnel in packing due to the carousel's integrated pick to light technology and RF picking. We do random inspection throughout the day. Our accuracy rate is 99.20 percent of orders shipped.

Aerial is a \$100 million family owned business in Marinette, Wisconsin, shipping nationally recognized brands of beauty products, such as Paul Mitchell, Matrix and Graham Webb to nearly 10,000 salons and 48 Aerial retail stores primarily in the Midwest.

Various sales promotions in this highly competitive environment – create spikes in shipping volume up to 50% in any given week. Aerial is able to deal with these wild swings by having a highly fluctuating work force with

flexible work schedules and equipment that will adapt from low volume to top speed immediately.

Aerial wanted to simultaneously (1.) grow their business, (2.) increase productivity without increasing labor and (3.) maintain their level of customer service. The rationale was to grow efficiently through automation and support their corporate policy requiring all orders received by 2 pm to be shipped the same day.

Initially, Aerial was picking complete orders from shelving and flow-rack to cart. In their current, modified facility this distributor handles about 7,000 SKUs, of which 5,000 are classified as slow to medium movers.

By putting the slow-to medium-movers in the carousels, typically the products that either take a long time to pick or turn less quickly than others, Aerial has increased their picking rates. "Having the product brought to the operators increased throughput significantly. Products picked from the carousels are picked three times as fast as

“We used to have 28 people picking orders. That number is down to 12 with automation. This has saved 43% of our labor while increasing our flexibility.”

they used to be,” said Nelson, “45% of our picks come from the carousels, 47% flow rack, 7% pallet and 1% bulk.”

In phase one of a calculated reconfiguration, Aerial redid their existing flow-rack into a two-level, Remstar carousel pick module where a series of four pods of two carousels each carry the slow to medium movers.

Underneath Aerial’s Warehouse Management System (WMS) is a control system provided by Dove Tree Software (San Diego, CA) that controls the carousel



Consolidation carousels increased productivity while saving floor space, labor and initial acquisition compared to other alternatives.

order picking. Below that is a middle-ware package provided by Autologik (Milwaukee, Wisconsin), that communicates with the conveyor control system.

In a simulation of the planned system, Aerial found that the average lines-per-order was 14 and they processed up to 1,000 salon orders per day in addition to the store orders it fills on a regular basis.

In their system development, Aerial went from one operator picking a

complete order to batch picking in multiple zones using a ‘pick and pass’ methodology between carousel pods and workstations. Aerial typically averages 500 lines per store and 5000 store lines a day.

The entire system processes up to 13,000 liners per day. The total facility is about 95,000 square feet – 23,000 of which was recently added in the spring of 2005.

Consolidation Carousels

In phase two of the redesign process, Aerial configured two light-directed consolidation zones. The primary zone is a consolidation ‘put’ pod of two carousels being fed by two lanes of accumulation conveyor. The second consolidation zone is a ‘put’ flow rack consolidation area next to the carousel system.

“The reason we put in the carousels,” explains Brenda Beyer, Director of Logistics, “was to eliminate labor, floor space and time – previously our handlers had to walk as far as 35 ft in order to place a tote in the consolidation area.”

The carousels are designed so that, as picked orders enter the consolidation area, the license plate for each tote is scanned to combine the totes/boxes until the order is complete.

The distribution center picks in a single shift operation and does its replenishment at night. Ensuring all the pick zones are within 45 minutes or less of each other is key to managing the operation. The orders need to be competed in all zones for the orders to be released in consolidation.

Shipping and Receiving

Including its smaller Lincoln, Nebraska, facility, Aerial services 56 retail stores and approximately 10,000 salons. 120 different vendors ship to the plant. At any given time, there are between 6,600 and 7,000 SKUs in storage. This number fluctuates depending on seasonal items.

For salons, they consolidate product from the plastic totes used for picking into corrugated boxes for shipping. Once the order is removed from the totes, the containers are re-used for salon orders.

“That’s what any new technology will be based on – next day service,” Beyer says.



Items are brought to the operator and batch picked increasing throughput and eliminating 10 miles of walking per day.

Sales, Sales, Sales

Aerial has a particular challenge with their store sales. “We may have 12 semi-trailer-loads in the yard holding product just for our promotions,” claims Nelson. “In that scenario the trailer will be used as the primary picking location so that we are not moving the product multiple times and not taking up space in our promotional aisle.”

RF Picking

RF is used in the manual picking areas. Pickers get an order number and the system guides workers where to pick and the required quantity, etc. When pick quantities reach a minimum level, an electronic order will automatically go to a stocker who will replenish that bin location.

“The entire automated system has really helped increase our efficiency and productivity. We used to have 28 people picking orders. That number is down to 12 with automation. We’ve eliminated workers walking up to 10 miles a day, allowing us to pick three times faster plus we can handle a 50% spikes in orders,” concludes Beyer.

REMSTAR
800-639-5805
www.Remstar.com • info@remstar.com
41 Eisenhower Drive, Westbrook, ME 04092