

Benchmark Briefing

Fast Retail Order Fulfillment





ASRS speeds fulfillment for pharmacy retailer

Pharmacy retailer expands operations by adding automation to zone picking strategy

In 1978, thirteen pharmacy owners centralized their purchasing and distribution power. Today, there are 32-member shareholder stores under the Value Drug Mart banner, as well as 11 Apple Drugs stores, Eight Rxellence Professional Dispensaries, and approximately 300 affiliated stores—all served by a central distribution center in Edmonton, Alberta.

The Value Drug Mart distribution center inventories over 18,000 pharmacy and front store items using a 28-zone picking strategy, with two zones using six Horizontal Carousel Modules (HCMs) with Kardex Power Pick System inventory management software.

Case at a glance

Site

Value Drug Mart, Edmonton, AL, Canada

Application

Retail order fulfillment & distribution of pharmacy products

Equipment

Six Kardex Horizontal Carousels with Kardex Power Pick System inventory management software

Increased
throughput
by 90%

Reduced
labor by 72%

Increased
accuracy



An automated solution

Value Drug Mart replaced two zones of static shelving with six Horizontal Carousel Modules and Kardex Power Pick System inventory management software. The Horizontal Carousel Modules were stacked and arranged in two zones of three carousels, each zone with a ten-position batch station.

All 10,000 SKUs were moved from the two shelving zones into the two Kardex Horizontal Carousel zones. The lower carousel zone manages 3,100 front store SKUs with an average pick rate of 350 lines per hour. The upper carousel zone manages 7,100 pharmacy SKUs and boasts a pick rate of 575 lines per hour. With a previous pick rate of 50 lines per hour from shelving, these two zones are averaging a 90% faster pick rate.



6 Kardex Horizontal Carousels arranged in 2 zones of 3 carousels each



Kardex Power Pick System inventory management software



Two 10-position batch stations

Managing order growth

Orders for front store items were increasing rapidly and the manual picking zones were not keeping up with demand. Previously, front store items were stored on the top-level mezzanine while pharmacy items were stored on the bottom. Using remote scanners workers traveled through shelving as directed by pick routing software to fulfill orders.

"We were picking as fast as staff, shelving and technology would permit, but it wasn't fast enough," said Dwayne Bilawchuk, Operations Manager. Value Drug Mart turned to automation to gain efficiencies in these critical work zones.

Automation – benefits and processes

Less labor

Not only are orders picked faster, but the labor required has been reduced by 72%. The shelving zones required three people for six hours per day to manage each zone. Each Kardex Horizontal Carousel zone is managed by one person working a five-hour shift. Reducing the total number of man hours for both zones from 36 hours per day to 10 hours per day of picking.

Scanning for accuracy

A scanner, similar to a retail check out scanner, is mounted at each end of the batch station. Before each item is placed in the order tote it is scanned for accuracy verification. The consolidation area spot checks orders for accuracy. "Our order accuracy has always been high, these measures help us maintain near perfect pick accuracy," says Bilawchuk.

Space savings

The previous shelving zones occupied 3,900 square feet (sq ft) on each level. All SKUs were moved from the mezzanine shelving into the six HCMs, stacked to create two zones. Each carousel zone now occupies 1,625 sq ft on each level, saving 2,275 sq ft of floor space – a 58% space savings! The recovered floor space is now used for bulk goods storage, much of which was previously stored in an offsite location.

Facility flow

Shareholder stores place several orders throughout the day. Orders for each store are consolidated into one order before they are sent through to the warehouse for fulfillment. This allows the distribution center to pick one order per store, but invoice it as the multiple orders that were placed.

The distribution center is divided into 28 zones (nine flow rack zones, five bulk picking zones, 12 shelving zones and two HCM zones). Using a parallel picking strategy, each order is divided up among the zones based on the SKUs the order requires. Each zone fulfills the order with the SKUs from that zone and sends the partial order to consolidation.

Orders requiring SKUs from the HCM zones, the operator first assigns a shipping tote to a location on the batch station, each tote represents an order. The operator can fill up to 10 orders at one time. With the push of a button the three HCMs spin to retrieve the SKUs required.

Using pick-to-light technology, the operator is directed to the exact cell to pick from within the HCM. The light tower displays the quantity to pick. The operator picks the quantity required and turns to distribute them among the orders on the batch station.

Each position on the batch station is fitted with put-to-light technology. This displays the quantity to put into each order tote. Before placing the SKU into the tote, the operator scans the SKU for accuracy using a scanner mounted at each end of the batch station. When the SKUs have been distributed among the orders, the operator pushes a confirmation button and is directed by the pick-to-light to pick the next SKU.

Completed orders are sent from each HCM zone via conveyor to the consolidation area where they are held until the rest of the SKUs required for the order arrive from other zones. Once all SKUs required for an order arrive at consolidation they are matched and forwarded via conveyor to shipping.

Managing seasonal demand

In the fall, Value Drug Mart manages a back to school program allowing schools to preorder supplies for children. Value Drug Mart provides the school one order per child with the supplies requested by the school.

“This is a growing seasonal program that we would not have been able expand without the addition of the Kardex Horizontal Carousels,”

Dwayne Bilawchuk, Operations Manager at Value Drug Mart