

BRIGHT IDEAS

Growing electrical and lighting manufacturer/distributor charges ahead to increase capacity and throughput

Quick growth can require quick decisions to stay on top of the market. That's been the experience at Globe Electric, a medium-sized manufacturer and distributor of electrical and lighting products based in Montreal. The company's sales have doubled over the past few years. As well, it has transformed itself from a firm that distributes products under other brand names to one where today, 80 percent of its products carry the Globe name.

The company has embraced the total quality philosophy, in order to streamline the operation and ensure exceptional customer service. Carlos Garrido Globe's operations manager, summarizes the company's mandate as: "We offer all our customers the highest service level in the industry. We invest heavily in our employees, and will continue to do so, by training them and involving them in decisions, systems and procedures. We will respond to any customer as efficiently as possible by investing in the necessary equipment and system."

To fulfill its mandate, Glob, worked with Synergistics HRDS, a Montreal-based consulting firm, to put management and employee training programs in place. Next, it was time to honour the second part of its mandate, and invest in the equipment and systems, needed for customer service excellence.

A CHALLENGE

The items Globe carries range from large fixtures, light bulbs and lighting accessories, to small electrical parts, such as dimmers and fixture parts. Globe's customers also run the gamut, from small, independent hardware stores to the largest home renovation centres.

These differences manifest



Global's carousel system, consisting of four 10-foot-high strings, has taken over half the operation's volume.

themselves in several ways: some customers require a case of fixtures or bulbs, others only need six bulbs to fill a shelf; some larger customers order up to a truckload at a time, smaller outlets only need a carton of product; some wish to receive several store orders at a main warehouse for crossdocking, others want direct delivery to stores across North America.

So the challenge facing Globe is to handle a large variety of items, customers and order cycles, without running separate operations. At the same time, it must work with more and more product suppliers, materials handling suppliers, and shippers. In total, the company holds over 5,000 SKUS (stockkeeping units), delivering about 9,000 cases per week over about 500 orders.

In the warehouse, the company required more capacity to handle the many new-and larger-items. Order selection had to be faster, as the company's customers were ordering more, and its customer base was continuously expanding. To support the capacity and productivity changes, Globe required enhanced computer support. Upgraded technology could also provide new customer services, such as electronic

data interchange.

To help restructure its warehouse and distribution systems, Globe turned to Kom International, a specialized logistics consulting firm. Several years earlier, KOM had helped reengineer the warehouse to improve storage capacity and productivity. This time, however, Globe required a greater change.

DISTRIBUTION SOLUTION

Together, KOM and Globe came up with several projects to improve the effectiveness of the warehouse:

- Expand the warehouse with a high-bay facility.
- Transfer small items, and over half the warehouse orderpicking, to a horizontal carousel.
- Implement a new management information system, including warehouse control, radio frequency and group picking.

The first step was construction of a 13,500square-foot, high-bay storage area, with 34foot clear stacking height. It features narrowaisle racking, supplied by Pacific Westeel of Burlington, Ontario, which takes full advantage of Globe's high-volume items. All 102 racks are placed in a double-deep configuration to maximize the cubic capacity of the warehouse addition. In fact, the expansion alone holds a maximum of 104,000 cubic feet of product, or 2,000 pallets. Situated at the start of the warehouse picking route, it provides all the larger items for the base of each outgoing pallet. In some cases, the entire pallet is selected from this area.

To service the addition, the company uses a Raymond model 30RDTT lift truck, provided by G.N. Johnston of Montreal.

The next decision was the purchase of a carousel. Globe sent a team of managers

By Richard Kingdon

to Geldermalsen, in the Netherlands, to see Albert Heijn, Holland's largest food retailer. Two years earlier, Albert Heijn, working with KOM International, had implemented six horizontal carousel workstations. The visit allowed Globe's team to see the carousels in action, providing the accurate and rapid order selection (Albert Heijn selects over 400 lines per hour, 12 orders at a time) that Globe required to effectively handle its small products.

While the first expansion simply added new space, and could immediately draw items from the existing space, the second was more complex. It involved emptying some floor space, inserting the horizontal carousel, removing items from the existing mix, and reslotting the remaining warehouse.

The carousel system, from White Integrated Technologies, based in Mississauga, Ontario, consists of four 10-foot-high carousel strings, facing one 10-by-20-foot workstation. In total, the carousel, lift table and conveyor outfeed measure about 120-by-45-feet.

The carousel arrived on-site in mid-December, and was ready for

operation six weeks later, in late January. It prioritizes downloaded orders, and selects 10 orders at once, guided by light trees and a sort bar. Working on one shift, Globe employs one selector and one replenisher to complete between 50 and 100 orders per day. When complete, these orders are merged with the pallet pick items. This is aided by a label on each carton from the carousel, which contains the order number, customer information, and indicates whether there is an accompanying pallet pick.

Just two months after implementation, the operator was comfortably selecting over 200 order lines per hour, a vast improvement over the old rate. Globe is continuing to work toward its target level of 300 order lines per hour—a five-fold improvement in selection productivity.

In order to store items on the carousel, each item had to be analyzed. Many operational questions had to be answered, such as if the company wanted to ship and store products in the same container. Globe chose to ship in corrugated cartons, so the carousel was designed to handle totes. After comparing different units, Globe chose

Versatote 1.5 polyethylene totes from Flexcon Products Corp. of Springfield, New Jersey. The totes were specifically sized to fit the carousel dimensions.

As well, during installation of the carousel, stocked items had to be accurately measured. This was performed by a Cubiscan measuring and weighing device, provided by Quantronix Inc. of Farmington, Utah. Still in use, Globe initially rented the machine, but now intends to purchase it to measure and weigh all new items. It offers a high level of control by feeding Globe's information system with all relevant SKU measurements.

In just three short months, Globe has benefited from these warehouse changes through reduced labour costs, and greater order processing efficiency. This fall, it will embark on the final stage of the project, implementing a new management information system.

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