

CROSS DOCKING: BYPASSING STORAGE

BY JERRY VINK,
FORTE DOD EXPERT



Distribution has entered the on demand era. Customers expect products when they are ordered—on demand, with an unprecedented level of compliance. To be competitive, companies must focus on moving product in and out of the warehouse in the most cost-effective, efficient and timely manner possible, while providing the services customers demand. They need to position distribution as a frontline business strategy.

For many, cross docking can be a valuable part of this strategy.

Cross docking—the process of moving material from the receiving dock to the shipping dock, bypassing storage—is a simple concept that is perhaps as long standing as warehousing itself.

Cross docking reduces inventory carrying costs, transportation costs and costs associated with order fulfillment and material handling. Holding inventory, moving it, counting it, picking it, and sometimes losing it costs money. While not a solution for everyone, such as those with strict FIFO requirements, cross docking can lead to significant benefits. It must fit the business, and the proper systems and processes must be in place to make it cost effective.

WHO DOES THE WORK?

Cross docking involves an inbound shipment to and an outbound shipment from the facility performing the cross-dock activity. A decisive issue is who prepares the material for the outbound shipment.

Companies such as retail chains will often negotiate with their vendors to have the vendor prepare the product specifically for cross docking before shipping it to the retailer's distribution center (DC).

The vendor may have to label cases for automatic sorting upon arrival at the retailer's DC, or the vendor may be required to sort and palletize cartons for each of the retailer's stores for quick and easy cross docking.

A firm that ships full pallets or floor-loaded trailers with just a few SKUs is dealing with a labeling and, soon, an RFID application task. If it must prepare orders for possibly hundreds of stores, it is facing a completely different level of effort—one requiring systems, software and automation to handle work previously done by its customers.

On the other hand, the task of preparing the outbound shipment may be handled by the company cross docking, usually within hours of receipt of the inbound shipment. This involves its own unique set of requirements.

CROSS DOCKING REQUIREMENTS

The proper processes, systems, and supply chain relationships must be in place to successfully cross dock on a large scale. With the right combination of these key elements, some distribution centers are able to cross dock more than 70 percent of their products. These systems include automated material handling, WMS, order processing systems, quality controls systems, and strong relationships between supply chain partners.

Automated material handling systems are often crucial for a cross docking operation. An automated cross docking system typically consists of a series of conveyors used for receiving and sorting cases. Barcode scanners read an identification code on each case to track the product through the cross dock system and, based on information from a WMS or order system, the automated system sorts the cases to trucks or to pallets for shipping.

On the software side, business systems may require special functionality to efficiently allocate inbound goods to existing orders, matching supply to demand. Some WMS systems permit opportunistic cross docking functionality to allocate received product to current demand in real time. And there is little stress on software systems when buyers predetermine distribution for special purchases or seasonal items.

Stringent, yet agile quality control (QC) operations are increasingly important as the volume of cross dock business increases, especially when handling new suppliers. Good QC is essential to avoid delays, bottlenecks, or the costs associated with shipping inferior product.

It's essential that supply chain partners develop close relationships and work as a team for a cross docking operation to be successful. The inability to establish a good working relationship can lead to failure in a cross dock endeavor. The sharing of information, clear communication, confidence in the quality and conformance of goods, and product availability are a few characteristics that produce effective cross docking.



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APPAREL SUPPLIER TAKING ACTION

A major, North American apparel supplier operates a cross docking operation in one of its distribution facilities. In order to avoid smaller inbound shipments to regional DCs, shipments are brought into the cross dock facility and combined with product from other sources to form full loads for shipment to the regional DCs. This arrangement, while adding very little time to the supply cycle, provides transportation savings and a centralized quality control operation with inherent benefits.

The facility utilizes an automated material handling system that interfaces with a host software system. Cartons are placed on truck unloading conveyors at the receiving dock and scanned by online scanners as they enter the processing system. The host system is notified of each scan and determines the disposition of each carton. Typically a sample of each SKU is routed to quality inspection while the balance routes to holding. Upon passing inspection, the SKU is released. At this time the product, which is still on the conveyor, is sorted for shipment to the various regional facilities, including local stock.

Without the cross docking material handling system, the same benefits (transportation savings, quality control, reserve stock, etc.) could be achieved but at a significant increase in labor and handling. The central distribution center would be required to put the receipt away into storage and then, upon release by quality control, manually pick orders for shipment to the other facilities—not a trivial task with the style, color and size mix of the apparel industry.

DISTRIBUTION ON DEMAND

Cross docking is one of the many tactical initiatives being employed by companies such as the apparel suppliers mentioned above. Such companies are embracing the Distribution On Demand (DOD) approach as they focus on driving costs out of their operations while satisfying customer demand. These companies are moving away from a static distribution model as they seek to be more competitive in the marketplace. Cross docking is a vehicle for decreasing operating expense while delivering quality goods in a timely manner.

Jerry Vink is the vice president of engineering improvement with FORTE. He has over 30 years of supply chain and distribution operations experience and is a registered professional engineer. He can be reached at jvink@forte-industries.com or by calling 513-398-2800.

FORTE (www.forte-industries.com), a distribution operation improvement (DOI) firm, provides turnkey planning, design, and implementation services for automated distribution centers. The scope of FORTE's projects range from reconfiguration, optimization, expansion, and consolidation of current distribution facilities, to the development of new, fully automated facilities.

Distribution On Demand: The order fulfillment state an organization achieves when it can respond—closest to real time—to changes in demand while shipping 100 percent customer-compliant orders at the least cost.



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