



Consultants in Material Handling Logistics

Operations Design for Warehousing, Manufacturing and Distribution

WAREHOUSE, CROSS DOCK OR DIRECT SHIP? MAKING THE RIGHT CHOICES

Under the right conditions, cross dock or direct shipping merchandise to retail outlets can save space in your warehouse, and reduce inventory investment. It can also reduce handling, by eliminating steps. However, there are potential pitfalls to using either system rather than traditional inventory methods.

Cross dock shipping refers to immediately shipping the products you receive at your warehouse, without putting them away or storing them. Merchandise is loaded onto outbound trucks directly from receiving, or it is briefly staged for sorting, and then shipped.

THE BENEFITS

Typically, deliveries of cross dock material to the warehouse contain fewer items and are more frequent than shipments of material to be warehoused. No storage space is required for products that are cross docked. The only warehouse space they require is a staging area. Since no inventory is required, it is possible to eliminate all inventory costs for these items. However, it is sometimes helpful to carry a small inventory in case of unforeseen emergencies. Usually, this should not be more than one week's requirements - considerably less than inventory in storage for most operations.

In a traditional operation warehoused items are received, put away into reserve storage locations, moved from reserve storage to forward

picking locations, picked or retrieved, staged and then loaded onto a truck. Cross docking eliminates the intermediate put away, transfer and retrieval steps, thus reducing the labor and time involved in handling the items.

Items that are direct or drop shipped are never brought to the warehouse at all. These products are sent from the supplier directly to the user or retailer. No warehouse space is used, no warehouse handling is involved, and generally there are no inventory costs. As with cross dock operations, deliveries consist of small quantities, and are frequent.

THE RISKS

The dangers of these systems are that they can make it more difficult to maintain consistent and reliable customer service, and they can increase costs if they are not carefully planned. For example, if you distribute to your own stores, it is important to avoid trading warehouse space for more costly retail space by over-ordering to assure item availability. The staging area for a poorly planned cross dock operation may take more warehouse space than a picking area for the same items. You also need to weigh the savings in the warehouse against the increased costs of ordering and transporting smaller quantities.

In many operations, cross dock and drop shipping are done in combination with warehousing. There are a number of factors to consider in

determining when each of these options will work best.

PRODUCT CONSIDERATION

Cross dock and direct ship operations usually work best when there is a consistent demand for the item. Demand for the item should be easily predictable, either to the retail manager, or to a central ordering specialist. The more erratic the movement of an item, the more likely that forecasting errors will be made and stock outs will occur. On the other hand, in circumstances where an item is seasonal, the demand cannot be predicted at all, and the season is short compared to the lead time for obtaining the item, it may make as much sense to cross dock as not to. This is common in the apparel industry.

Some important item characteristics are special handling requirements, size, and perishability. Costs of handling the specific items should be compared for each of the systems. You should look at the price of the item purchased in increments that would reflect the quantities you would buy under each of the systems. You need to make similar comparisons for inbound and outbound freight costs for the item; warehouse labor required to handle the item; the inventory cost of the item; and the opportunity cost of the warehouse space needed to handle or store the item.