



The Distribution Factor

Helpful Information and Ideas for the Distribution Professional

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E-mail:



Sam Flanders, President 2WMC

Last month we looked at 5 reasons for customer dissatisfaction, originating from the distribution center. This month I give you five more. Yes - the DC is a critical link to customer satisfaction (or dissatisfaction) and this article will tell you why.

The video of the month looks at an often overlooked, but very important safety concern in the warehouse - pallet rack safety.

My operations spotlight will continue a story on void fill options.

Finally, I continue a story on the storage of large numbers of pallets of the same item. Last month we looked at non-permanent storage. This month, we look at more permanent storage options.

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Your DC and Customer Service

Part II

Last month we began our look at the distribution center from a customer service perspective. Companies with the highest levels of customer satisfaction always carry their goal of customer service perfection into the distribution center.

This month we continue our investigation, focusing on the 5 items that are most likely to cause you to lose a customer for good.

This month's feature article is looks at how the DC can affect the satisfaction of your customer, and even how it can cause the loss of a customer through critical service failures.

5. Poorly Presented Product

The way you present your product can make a direct impression on

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your customer. Product that is randomly thrown into a box doesn't give a positive impression to your customer. Presentation is even more important as the value of the items in the order increases.

4. Shipping the Wrong Quantity

This is a harder problem to catch, even with double-checking. One way that can work reliably is weigh-checking your order, but only if you have items that weigh at least a few ounces each. Scales can't help with very lightweight items due to variations in packaging and transport containers.

3. Receiving a Damaged Product

If you have a high value or fragile product, care must be taken to insure that it will get to the customer in perfect condition. Good packing and packaging can help, but you are still at the mercy of your carriers when it comes to damage. Certain box sizes and shapes may be more susceptible than others. Keep track of problems and try to determine if there are common characteristics.

2. Receiving the item Late

Depending on the situation, this can be the number one cause of customer frustration. It can occur during peak or seasonal periods, and sometimes it can be caused by weather or shipping delays. My advice is to let your customer know proactively whenever possible, when their shipment may arrive late. This can sometimes be done automatically with computer systems. Always under promise and over deliver.

1. Receiving the Wrong Item

The best way to lose a customer is to ship the wrong item to them. You can minimize the frequency of shipping errors through proper training, easy to understand pick documents, location labeling, and double-checking items before you ship. Checking can be further enhanced using computer systems such as voice, weigh checking, or bar code verification.

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[Video of the Month: Pallet Rack Safety](#)

Many companies take the safety of their pallet rack storage system for granted. The system has been 100% safe for years, and there is no reason to believe that this will change. Before you get too comfortable, take some time and look at your current rack installation. Do you have dented or bent uprights? Are all of your beams properly fastened with undamaged hardware? Do your drivers know the load limits of various rack sections and the weights of the pallets that they are storing? It takes just one event to bring an entire section of pallet rack down. A single failure can be costly, and more importantly, can cause serious injury to your employees.

[Click Picture to Play](#)



Video Courtesy:

SESS
Storage Equipment Safety Services

[Requires Flash](#)

[Clicking the graphic to the left will](#)

Strategies for Optimizing Traditional
Batch Pick Operations - Part I
Developing a Roadmap for Improving
Order Picking Performance
December 1, 2011, Part II
February 1, 2012

The paper outlines an order picking problem. In practice, an order picking problem may be quite different. This article is designed to help you think about how to approach the problem. It is not intended to be a definitive solution. Instead, it is intended to help you think about how to approach the problem. It is not intended to be a definitive solution.

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Warehouse Pick & Return Guide: A Guide to Returns Management, Version 2.0
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Click the icon above to be taken to our White Paper page. This page has 4 different white papers of general interest to those who manage order picking operations. There are two white papers on general order selection, and there are also papers on carousels and voice directed picking.



Click on the icon above to be taken to our material handling resource locator guide. This guide is interactive, easy to use, and driven with an icon-based interface. Using it, you can quickly locate information on systems, software, and equipment. Each area provides links to vendors as well as a brief description of each technology. Try it out and bookmark it for future reference!

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Above: A Pallet Rack Collapse
Photo Courtesy: SESS

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[open a new window and play your video.](#)

Operations Spotlight – Void Fill Options – Part II

In our operations spotlight, we complete a series on how to pack and fill the void before shipping out a package. Many different types of fill and void fill equipment have been introduced over the past 20 years. We will proceed chronologically, starting with some of the systems that have been around the longest, and proceeding to the most modern systems commonly available. We look at some of the more modern solutions this month, including bubble on demand, air pillows, and foam.

This month - More Recent Solutions

Last Month - Paper and Peanuts



Above: Air Pillows
Courtesy Airfil

Below: Bubble on Demand
Courtesy FP International

Above: Foam Tubes on Demand
Courtesy Sealed Air

Below: Overhead Dispensing System
Courtesy Storopack

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We evaluate low or no cost solutions first, and then show you what you can do before you invest in capital solutions. We then show you the true value of those capital solutions by evaluating only the additional savings that they may provide - a step often skipped over by salespeople.

We understand all types of order selection systems, including voice directed picking, pick to light, carousels, AS/RS systems, sorters, A-Frames, and RF scanner based systems. We can help you figure out which solutions are best for your operation.

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- **Air Pillows** - Air pillows have been around for a while now. They offer excellent protection and are very strong. They won't matt down no matter how long the trip. They can fill a void rapidly and effectively, but they are very slippery. As a result, heavy items may shift around when protected with bags. This could be a problem if a fragile item works its way to the edge of a shipping container.
- **Foam Bags and Foam on Demand** - Foam can be used to create customized cushioning for higher value items. Molds can be created that can inexpensively create form fitting foam pads for protection of delicate equipment or fragile items. Foam can also be fit into a random void and will expand to fill it perfectly after a box is sealed. Foam is superior to other void fill in one aspect – in that it can fix materials securely in place in the shipping container.
- **Inflatable Bags** - Inflatable bags represent a cross between the foam in place and simple air pillows. Like foam in place, an inflatable bag can be inflated to fill a void perfectly. Unlike foam in place, the inflatable bag will not conform perfectly to the item it is protecting, and it may allow the item to shift around in transit.
- **Overhead Dispensing Systems** - All void fill systems can be set up to be dispensed from an overhead dispensing system. The advantage of an overhead dispensing system is that materials can be brought into the void under the force of gravity. Slower systems can be used at a single pack station. High-speed systems can be used "in-line" when a train of open boxes is fed under the dispenser. Depending upon the type of system used, overhead systems can dramatically speed up the time to fill a single order.

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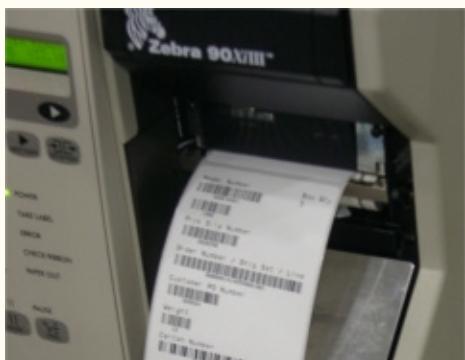
Technology of the Month – Pallet Storage Options (Part II)

Are you thinking about adding to your existing pallet storage? There are a number of alternatives to traditional selective pallet rack that you may want to consider. Last month I looked at non-permanent floor storage.

This month, I'll look at some more permanent, and more costly options, including drive in rack, driver through rack, pallet flow rack, and push back rack.



Above: Drive in Rack can store many pallets very densely for just





A Look Ahead to Next Month

Feature Story:

20 Ways to Use the Supply Chain to your Advantage

Video of the Month:

Bubble Wrap on Demand

Operations Spotlight:

Fire Safety - Sprinklers

Technology of the Month:

Do you have the right powered vehicles?

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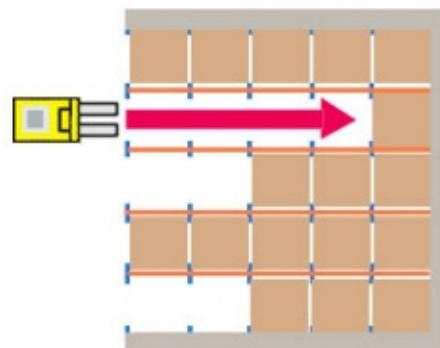
Above: Block (Free Standing Pallet) Floor Storage

Double Deep Rack: You can significantly increase your storage density just by putting two runs of pallet rack together. The gotcha is that you will need a powered vehicle that can get to the rearmost pallet in each storage location. This truck, called a "double deep reach truck" can access either the front or rear pallet with ease. Double deep rack may be appropriate if you have many items that you regularly store with 5 or more pallets on hand. The neat thing is that double deep rack costs the same per pallet position as traditional selective rack, but it increases your effective pallet storage density by approximately 25%.



Above: Drive In Rack - Steel King

Below: Drive In View - Cisco Eagle



Drive In and Drive Through Rack:

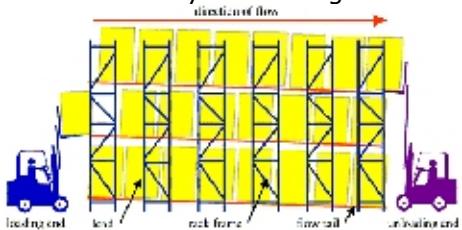
These racks take the idea of the double deep rack and let you go even deeper - 10 or more pallet positions deep. The catch is that you must load the rack in a sequence similar to the way you would stack pallets on the floor. The rack has tracks on each pallet level, and the driver must lift the pallet to the appropriate level prior to entering the rack, and then you must drive in a narrow space to place the pallet down. Experienced and careful drivers must be used.

This type of rack can have up to 5 or 6 pallet levels. A traditional sit down truck can be used to load and unload the locations. Drive through track lets you actually go in one end and come out the other, while drive in rack permits access from only one end. Drive in and drive through racks cost only a little more than traditional pallet rack per pallet position. This type of system can improve storage density 40-60% over traditional selective rack.



Above: Pallet Flow Rack
Below: Pallet Flow Diagram

Courtesy: Cisco Eagle



Pallet Flow Rack and Push Back Rack: A more expensive, but easier to access system that allows the same storage density as drive in/through rack. Since you don't enter the rack, you can access any position or level, but only the outermost pallet. Push back rack lets you store and retrieve pallets up to 6 pallet positions deep from a single selective face, and the faces can be stacked up to 6-7 levels high. Pallet flow rack lets you go even deeper, and feed in pallets from one side and pick them out from the other. Again, you can select any face at any level. Pallet flow is great for FIFO applications, but it does require an additional access aisle. Both solutions are only suitable when you have large on-hand pallet quantities of a single SKU (usually 10 or more). These systems can cost from twice to several times the cost of traditional selective rack.

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