

Space use in Carton Flow Rack

By Don Benson – www.warehousecoach.com

Last week, in two different conversations, I was asked to talk about how to optimize the use of carton flow rack for repack picking. I discussed this topic in a column a couple of months ago, and in reviewing it I noticed some additional points that you might find helpful. In that column I mentioned the importance of sizing the locations, grouping SKUs by height, and the several methods of organizing replenishment. However, in both of these recent discussions the primary issue was that the number of SKUs continued to increase but they did not have space to grow and their companies did not have that money to invest in more rack. An efficient picking operation needed more SKU pick facings.

I often notice that when a subject comes up frequently, there are often many more people who are experiencing the same issue at this time. And, of course, these were situations in which there was not one simple solution, but rather required many small changes helped. So here are a few items I suggest you implement, whether you need the space for more SKUs now or not.

SKUs in Flow Rack – Some years ago, some flow rack manufacturers published guidelines for the selection and use of flow rack for less than case picking. One of the key guidelines was because flow rack is the most expensive static storage medium per cubic ft. of merchandise it should be used primarily for SKUs that have the highest number of picks per day. So if you are on a tight budget and have a limited amount of carton flow rack, I suggest that you regularly (perhaps as often as monthly) review the order activity of the SKUs in flow rack, move the slow SKUs to shelving and keep only the highest activity items in the flow rack, and keep a few empty locations available for new items when they arrive. This is an important housekeeping task that is often overlooked until it becomes a major project. (There are Slotting Programs included within some Warehouse Management Systems and separately available that could be worth the investment if you have a large number of SKUs).

Vertical opening between shelves – There are two changes we have used to optimize the opening height on each shelf. Like pallet rack, installers often place all the shelf decks in flow rack in a nice, neat and consistent height along a rack row, because they do not have instructions to do it differently and because it looks good that way before it is filled. Yet we know that the carton heights for all SKUs are not the same. So when SKUs are assigned to rack sections and cartons are

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placed on the shelves, there often are some cartons with very little space between their tops and the shelving above, while for other cartons the space is far more than needed. So, a significant step to increasing the number of SKU pick positions in flow rack is to group SKUs on a shelf with similar carton heights. I have found that this process can occasionally create enough vertical space to add another shelf within a section, without having the top shelf mounted too high for the picker to reach.

Another step to increasing the pick location capacity in carton flow rack is to reevaluate the method you use to open the cartons. I have found that in many warehouses the cartons in the flow rack have their flaps standing up in the air, filling the space between the carton and the next shelf. In these situations, the flaps are not only using valuable space, catching on the shelf to stop the flow, and they also can scrape the skin on the forearm of the pickers as they reach into the carton for the merchandise. You have two options here. Most warehouse workers can learn to cut the carton tops off without damaging the merchandise, and this is the process I suggest. If you choose this method, I recommend that the stockperson do the cutting and that the cut off carton top be replaced on top of the merchandise until the carton has moved to the forward position in the lane and the contents are being picked. All warehouses are dusty environments and regardless of the speed of movement through the flow rack system, merchandise in an open carton will get dusty. The carton tops are much more effective at keeping the merchandise clean than wiping the dust off before shipping it to the customer.

An alternative where there is a strong resistance to cutting the tops off cartons is to have the stockperson open the carton, folding the flaps back to their original position when placing the carton into the rack, and then when the carton moves to the front position the picker can pull the carton out, fold the flaps back over to the outside and then place a large rubber band around the carton to hold the flaps down along the sides of the carton. The result is the same (covering the merchandise when the carton is in the lane, and keeping the flaps out of the way when the carton is being picked), and while the risk of cutting the merchandise is eliminated, the picker now has another task. And the result is the same for space use.

Long side or short side facing – Another way we have increased space use in flow rack was suggested in the guidelines provided by the flow rack vendors. We usually design the flow rack pick area with pick locations that will hold approximately 1 week demand per SKU-lane. In our analysis of SKU activity we start by determining the average weekly demand for each of the SKUs we were going to assign to flow rack, and convert that amount to a number of cartons. The

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next step was to determine how many cartons will fit in a lane for each SKU with the long side facing the picker or with the short side facing the picker. Often orienting the cartons with short side facing down still provides an adequate inventory level for the SKU and I have seen instances where by paying attention to that option, we have created the space for an additional SKU per shelf after the adjustments.

These are just a few ideas that you can implement to get the most out of your current investment. I encourage you to begin the process as soon as possible. You will experience productivity improvement and create additional locations perhaps before you need them.

If you have an area of your warehouse that needs to improve, let's talk about it. You can reach me at coach@warehousecoach.com