Easy Steps to Maximize Your Warehouse Space and Increase Pick Locations

by Brad Emerson

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10 Easy Steps to Maximize Your Warehouse Space and Increase Pick Locations

Do rising SKU counts, crowded aisles and limited pick locations sound familiar? Are you using every inch of warehouse real estate and still coming up short? If the answer is YES, we've got an article for you. Our ***10 Easy Steps to Maximize Warehouse Space*** provides manageable, hands-on solutions to these common storage woes. Our strategies are also cost effective; minor investments compared to an expensive expansion or warehouse lease. So read on…

1 Simply Add Wire Decking to Various Pallet Rack Levels

… and convert single pallet locations of slower moving items into multiple item/case pick locations. This will open up several full pallet slots for higher volume and restock items.

Problem:

- A typical storage configuration designates one pallet location for every item in the warehouse, including high volume, slow moving and mandatory seasonal SKUs. Purchasing orders multiple pallets per the restock order and individual cases through a distributor. In addition, your business product mix changes and customer buying patterns fluctuate, leaving you with accumulated inventory. As much as half of the items stored could be ordered in lesser quantities.

Solution:

- Restructure purchasing cycle to order lower volume items in monthly or quarterly quantities
- Add wire decking at designated levels to create 6 to 8 slower item pick faces per shelf
- Reconfigure high volume items to open full pallet locations

2 Covert Lower Shelf Levels to Case Flow Racking… and add as many as 5 shelves or 35 pick faces per bay!

Case flow is an ideal storage medium for items with a slightly higher volume case count than wire decking. Case flow shelving provides the depth needed to create a pick and reserve lane that accommodates 8-10 deep vs 2-3 deep, as seen on wire decking.

Example:

- Case flow racking is mounted to pallet rack beams or clipped to an adapter strip bolted to the rack frame.
- Individual shelves consist of gravity flow rollers that allow cartons to flow freely from the input lane to the pick lane on a 1" per foot slope.

- Items stored in case flow have a higher turn than wire decks and should be sized to the depth of the shelf to allow approximately 2 weeks replenishment.
- Case flow typically comprises 5 to 10 bays in a warehouse for items of similar volume levels.

- Transfer faster movers to high volume areas as needed and perform monthly inventory audits to ensure acceptable volume levels in all areas. If volume of a particular item exceeds allotted case flow levels, this will result in higher labor cost for replenishment.

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3 Add Multiple Pick Levels Within Bays... to increase pick slots for those 'middle of the road' SKUs (volume is too fast for case flow, but too slow for a dedicated pallet position). Picture that these items really need ½ a pallet position or less, 48"x40"x 30" high vs. the tradition 48"x40"x60" – With lower pallet height, you can now add two additional beam levels within the same bay opening.

Example:

- Standard bay, 3 levels high (2 shelves and floor), each 2 pallets wide , 24" high pallet load
- Add 2 additional shelves to accommodate 4 more pallets in existing space

4 Build Rack Tunnels at Row End and Center Crossover Aisles ... to create reserve pallet storage in unused air space.

The addition of tunnels over single rack rows provides needed reserve storage locations, but when added to the ends and middle of back-to-back selective, drive-in and push-back racking, tunnels will provide better cube utilization of the warehouse without interfering with the normal pick path of the forklift.

Example:

- A base warehouse has 20 rows, 25 bays each, of back-to-back selective racking - Each row is 5 levels high with 10 pallets per bay; for a total of 10,000 pallets pick and reserve. A cross over aisle is located at both ends and middle for the warehouse.
- By adding 6 tunnels per back to back row, (12' beams, each 3 pallets wide and 3-levels high) to increase the pallet count by 1,080 or 10%.

5 Move the REALLY Slow Movers to Steel Shelving... to further consolidate slow volume items.

Free-up valuable floor space by moving the steel shelving to a separate section of the warehouse, or by simply converting 1-2 bays of racking to a slow-pick shelving area - Remove bottom beams to accommodate steel shelving units, creating up to 50 pick faces in a single bay, or even hundreds in a dedicated shelving pick area.

6 Utilize Mezzanines ... to increase square footage without bricks and mortar.

In buildings with sufficient ceiling height, mezzanines elevated above the floor make use of unused overhead space to provide 2nd and 3rd level storage of shelving, case flow or pallets. Total pick faces can be doubled or even tripled with effective use of storage mezzanines.

7 Add a Rack Supported Pick Module... to double or triple pick faces.

Similar to a mezzanine, multi-level pick modules add additional storage and picking areas above the floor for pallet, case or individual piece pick functions. This can be accomplished with or without conveyors based on how the warehouse picks and ships orders to customers.

Example:

- The most efficient example is a 3-level rack module with a full pallet pick level (floor), a 2nd case pick level and the top level reserved for standard shelving or case flow. The total SKUs per square footage is doubled or tripled vs. conventional rack or floor storage. Conveyor automation within the modules speeds up the movement of pick to the dock area over conventional forklifts, pallet jacks or cart selection.

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8 Narrow Your Aisles... to increase storage capacity up to 20%.

Reduce aisle spacing to narrow aisle for general inventory and very narrow for slow movers.

- **Narrow Aisle:** A 13' aisle with use of a standard forklift can be reduced to 10' with use of a reach fork truck. This narrow aisle configuration effectively opens floor space for additional rack rows, increasing the number of pick faces and overall full pallet reserve locations, resulting in a 10-20% increase depending on building width and number of aisles.

- **Very Narrow Aisle:** Very narrow aisles are typically 6' on average and accomplished with use of an order picker forklift for slow mover order selection in 1-2 aisles. Additional small slot pick locations are gained by adding multiple beam levels and/or wire decking. Consolidating small picks to these 1-2 rows will free up additional floor space in the warehouse. The downside to this configuration is slower order picking productivity when using a man-up order selector.

9 Look Up! - Extend Rack Height and Use Taller Forklifts... to convert up to 4-5' of unused overhead space.

If ceiling heights allow, taller rack frames can add needed pallet locations in previously unused space. The downside to this solution is that certain sprinkler design codes require an additional sprinkler level for racking above 25' tall. In most cases, this extra storage space offsets the cost of new construction/expansion to gain additional square footage.

10 Consider Warehouse Management Software (WMS) ... for measurable productivity gains.

You're probably using basic WMS modules already - for bills of lading, shipping, pick tickets and on-hand inventory control. But don't miss some of the newer warehouse management and control software that specialize in order selection – they go above and beyond the base software to direct the order selector to the location for pick and replenishment of the product in inventory. When utilized in conjunction with purchasing, WMS helps reduce inventory levels and manage the items for random slotting in areas, effectively reducing labor times. WMS can make the small warehouse more efficient, deferring the need for building expansion.

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