

RF Pathways

Warehouse Location Naming & Product Slotting



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LOCATION NAMING & PRODUCT SLOTTING

Product Slotting is defined as the intelligent location of product in a warehouse or distribution center for the purpose of optimizing material handling efficiency. Sometimes called inventory slotting, or inventory profiling, it identifies the most efficient placement for each item in a distribution center or warehouse. Since each instance is unique, product slotting depends on a variety of factors.

Some of the key benefits of a well thought out slotting strategy are:

- Picking Productivity – Travel time can often account for up to 60% of a picker’s daily activity. A good product slotting strategy can reduce travel time thereby reducing picking labor.
- Efficient Replenishment – By sizing the pick face locations based upon a standard unit of measure (case, pallet) for the product in question you can significantly reduce the labor required to replenish the location.
- Work Balancing – By balancing activity across multiple pick zones you reduce congestion in the zones, improve material flow and reduce the total response time for a given order or batch of orders.
- Load Building – To minimize product damage, heavy products are located at the beginning of the pick path ahead of crushable product. Product may also be located based on case size to facilitate pallet building.
- Accuracy – Similar products are separated to minimize the opportunity for picking errors.
- Ergonomics – High velocity products are placed in a “golden zone” to reduce bending and reaching activity. Heavy or oversized items are placed on lower levels in the pick zone or placed in a separate zone where material handling equipment can be utilized. Pre-Consolidation – By storing and picking product by family group you may be able reduce downstream sorting and consolidation activity. This is particularly important in a retail environment to facilitate efficient restocking at the stores.
- Space Utilization – With the right product in the right sized locations substantial cube can be freed up allowing for additional product placement or avoiding facility expansion or overflow.

On-going Product Slotting Maintenance is very important. Operations managers typically do a good job of slotting their warehouse initially. Over time, however, customer demand changes, products come and go, and before too long labor costs are way up, order fulfillment rates are way down and response times are negatively impacting customer service and profitability. It is important to continually re-slot the warehouse to keep it operating at maximum efficiency. Some reslot their highest movers (typically also their most profitable products) on a daily or weekly basis.

Location Naming:

There are several considerations when determining a location schema “naming convention” for a warehouse. Some points to consider:

Key Points:

- Pick methodology used may influence how locations are named.
- Clearly marked Aisles allow for a quick visual reference.
- Aisles can be identified using Alpha or Numeric characters or both, i.e. A, B, C, or 1, 2, 3, AB, A1.
- Identify the directional flow; this is the direction associates will most efficiently travel through the warehouse while picking orders.
- Racked location types: Single Pallet, Double Deep, Drive Thru, Drive In, Push Back, Stackable, Cantilever and Pallet Flow just to name a few.
- Other storage types used; Shelving, Cabinets, Containers and more.
- Bulk Floor Storage Locations – multilevel pallets stored on the floor.
- After the aisles have been identified start at the beginning section of an aisle and measure the distance between the uprights (Racking mainframe that supports the horizontal beams).
- After measuring the distance between uprights, determine how many locations will exist in that bay (distance between uprights) and pallet width.
- Measure the length, height and depth of each location (record the information).
- Repeat the steps from aisle to aisle and for each level.
- Determine if each location is a single item/part location or a multi-item/part location.

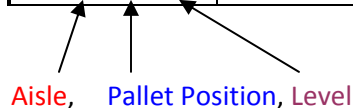
Generally, the location dimensions will only need to be recorded a few times for each aisle and level because they are repeated.



There are several naming conventions used throughout the industry. A well defined naming system will enable workers to quickly find locations when doing Put-away, Order Picking, Replenishment or while performing Re-warehousing functions.

Examples of location addresses:

17-01-D	17-03-D	17-05-D
17-01-C	17-03-C	17-05-C
17-01-B	17-03-B	17-05-B
17-01-A	17-03-A	17-05-A



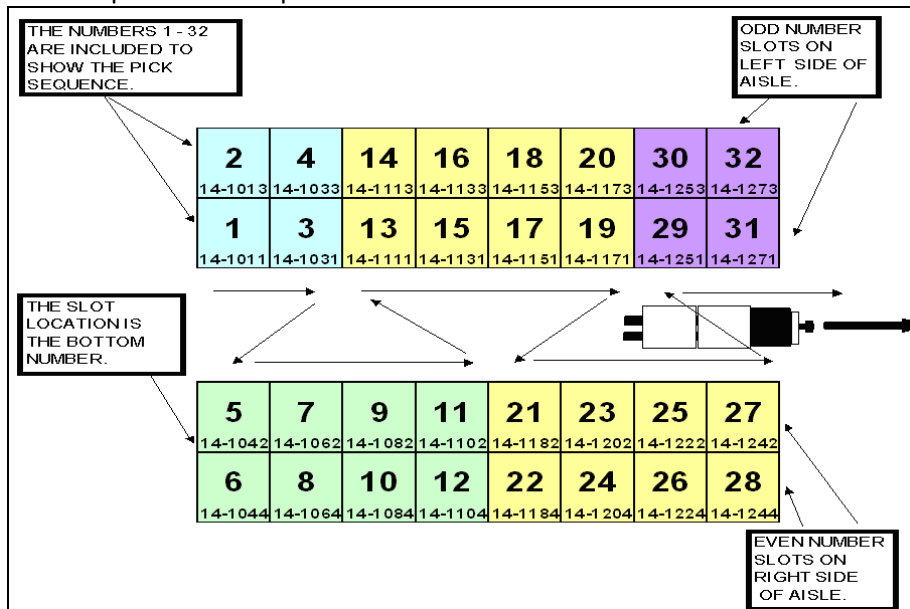
Each numbering address is unique to a location in the distribution centre. A Distribution facility may choose to have **Even** location numbers on one side of an aisle and **Odd** numbers on the other. This will depend on the facility and type of inventory being picked.

Location naming systems should be flexible enough to allow for new aisles, locations and levels to be inserted without having to rename the entire area. Distribution Center requirements are continuously changing and flexibility is the key.

Sequencing

Most warehouses have an existing location naming convention in place. Exclusive to RF Pathways WMS is an additional control method that can be utilized so that your locations do not need to be relabelled. Our process is referred to as “Sequencing” and it is an additional attribute attached at the location master level. Sequencing supersedes the location schema which will determine the pattern an associate will travel. Instead of following an alpha numeric address, our code uses the lowest to the highest number. Sequencing allows the flexibility of numerous pick patterns such as Z or U-Pick, vertical or horizontal to be accomplished.

An example of a Z Pick pattern:



Samples of Bar Coded locations:

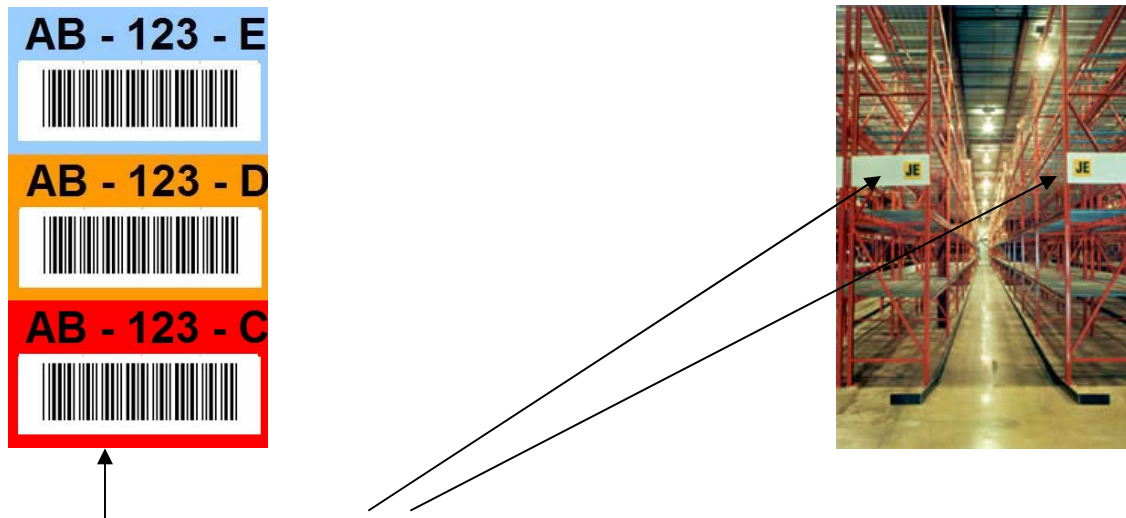


When generating location labels the human readable **Location Address** “17 – 01 – 01” can have spaces and dashes making it easier for associates to quickly find the location in the distribution center.

However, when generating the actual Barcode label for scanning do not use spaces or dashes, this will make keying in the location on an RF Gun easier. The barcode label would be setup as 170101 without spaces and dashes.

Location labels can also be color keyed to matching color panels on the floor level placard which is mounted on the frame upright. This allows for a quick visual reference and scanning accuracy.

Associates can place pallets in the upper level locations of the warehouse and scan the matching location from a placard at floor level. (Man Down Scanning). An example of a floor level Placard used for scanning, this placard would be mounted on the frame uprights at eye level normally.



Floor level placard mounted on the racking uprights.

Product slotting is an ongoing process and requires continuous analysis in order to maintain productivity efficiencies and optimal space utilization. RF Pathways provides a complete end to end solution in the areas of:

- Fully integrated RF enabled WMS
- Technical Project Management, Scoping, Planning and Design
- Physical Distribution, Facility Layout, Slotting, Location Naming, SOP's
- Development, Integration, Testing (across all verticals and modules)
- Data Migration and Interfaces
- Security Administration
- System/Database Administration

Discover how our warehousing experts can help ensure your facility is designed to maximize productivity and space utilization, we invite you to contact us for your free, no-obligation site assessment.