

In-Plant Operations

Movements in the Warehouse

Material movement in a warehouse can be generally classified into but limited to consolidations, replenishment, and miscellaneous moves.

Consolidations

Consolidation is the combining of material from several partly filled storage locations into a single one to make space available for new material. Consolidation can be carried out for commodities that have partly full storage locations. Consolidation reduces the space occupied by inventory and can increase inventory turns hence increasing efficiency of workplace.

In any typical warehouse, vendors ship partial orders, then quality control draws samples and return them to stock. If shrinkage and damage occur, partly filled locations will occur and warehouse space utilization will suffer as a result.

Movement due to Inventory turns

In any warehouse, there are fast moving items and slow movers. Items that are fast moving are provided with more space while slow movers typically will have less space. By segregating fast moving items from slow movers, productivity can be improved by minimizing the amount of time warehouse associates spend traveling and maximizing the time they spend picking and putting away commodity.

The calculation of velocity is important during segregation. Velocity, for this purpose, should be a measure of the number of times the product is handled each unit period of time.

A system similar to ABC method of calculating inventory can be used. Instead of using the purchase / sale price of items, only the unit cost of handling the commodity can be used.

Replenishment

Replenishment occurs when a warehouse has less than a full caseload of picking for commodities that are picked on caseload basis. Case-Pick Area is an area of the warehouse that is set aside for the picking of less than pallet quantities. The amount of space devoted to each item is usually relatively small. Bulk breaking industry is an good example where Replenishment is an important aspect of business.

When replenishing Case Pick locations, inventory may be allocated from Reserve or Active. The purpose of replenishing is to ensure that inventory is available at the location when a picker arrives to pick inventory.

Replenishment involves computing the replenishment need and priority, allocating inventory, and creating tasks. Replenishment can be triggered by the Picking Wave Process or manually.

The different ways of triggering the replenishment cycle are:

1. Replenishment triggered by the Pick Wave Process:

Replenishment can be performed for each wave during the wave process or for one or more waves separately. Using Wave Management, replenishment can be triggered for one or more waves that were run during the day. This will allocate inventory from Active or Case Pick locations (depending upon setup) and replenish those locations if necessary.

2. Replenish manually:

Replenishing can be performed manually when it is required but manual replenishment is not recommended.

Miscellaneous Moves

In addition to above, WMS systems allow the movement of just about anything from almost anywhere to almost anywhere else. Inventory supervisors will always need the flexibility to do what the situation dictates.