



**Best Practice**  
**eXensys –Inventory Warehouse Structure**

Exensys Software Solutions Ltd.		AA/B/CCDD V x.y
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## Introduction:

A warehouse is a commercial building for storage of goods. Warehouses are used by manufacturers, importers, exporters, wholesalers, transport businesses, customs, etc. They are usually large plain buildings in industrial areas of cities and towns. They come equipped with loading docks to load and unload trucks; or sometimes are loaded directly from railways, airports, or seaports. They also often have cranes and forklifts for moving goods, which are usually placed on ISO standard pallets loaded into pallet racks.

Some warehouses are completely automated, with no workers working inside. The pallets and product are moved with a system of automated conveyors and automated storage and retrieval machines coordinated by programmable logic controllers and computers running logistics automation software. These systems are often installed in refrigerated warehouses where temperatures are kept very cold to keep the product from spoiling, and also where land is expensive, as automated storage systems can use vertical space efficiently. These high-bay storage areas are often more than 10 meters high, with some over 20 meters high.

Because inventory is stored in warehouses, the physical management of inventory and warehousing are intimately connected. In some cases, inventory may be stored for an extended time. In other situations, inventory is turned over rapidly, and the warehouse functions as a distribution center.

In a factory, “stores” perform the same functions as warehouses and contain raw materials, work-in-process inventory, finished goods, supplies, and possibly repair parts. The basic objectives of a warehouse are:

1. To store the inventory and keep track of items so they can be found readily and correctly.
2. Minimize the total physical effort and thus cost of moving goods into and out of storage.

## Overview:

Warehouse structure is concerned with the location of individual items in the warehouse. There is no single universal stock location system suitable for all occasions, but there are number of basic systems that can be used. Which system, or mix of systems, is used depends upon the type of goods stored, the type of storage facilities needed, the throughput, and the size of orders. Management must maintain enough inventory of safety and working stock to

provide the required level of customer service, keep track of items so they can be found easily, and reduce the total effort required to receive goods, store them, and retrieve them for shipment. The following are some basic systems of locating stock:

1. **Group functionally related items together.** Grouping of items which are similar in their use. If functionally related items are ordered together, order picking is easier. Warehouse personnel become familiar with the locations of items.
2. **Group fast-moving items together.** The work of moving such kind of items in and out of storage is reduced. Slower moving items can be placed in remote areas of the warehouse.
3. **Group physically similar items together.** These items often require their own particular storage facilities and handling equipment. Small packaged items may require shelving whereas heavy items require different facilities and handling equipment. Frozen foods need freezer storage space.
4. **Locate working stock and reserve stock separately.** Relatively small quantities of working stock – stock from which withdrawals are made – can be located close to the marshalling and shipping areas whereas reserve stock used to replenish the working stock can be located more remotely. This allows order picking to occur in a compact area and replenishment of the working stock in bulk by pallet or container load.

eXensys 4.1 supports the “Floating Location” to store the items. The same SKU may be stored in several locations at the same time and different locations at different times. The advantage to this system is improved cube utilization. Following example will illustrate the inventory warehouse structure:

**Sub Org Code: PMT\_01**  
**Warehouse Code: WH\_01**

Bin Type Code	Bin Type Name
SS Coil	SS Coil
SS Patta	SS Patta

Warehouse Code	Bin Type Code	Bin Type Name	Bin Code	Bin Name
WH_01	Coil	Coil	SS Coil 14/4	SS Coil 14/4
WH_01	Patta	Patta	SS Patta 14/4	SS Patta 14/4
WH_01	Coil	Coil	MS Coil 18/1	MS Coil 18/1
WH_01	Coil	Coil	SS Coil 18/8	SS Coil 18/8
WH_01	Patta	Patta	MS Patta 18/1	MS Patta 18/1

Warehouse Code	Location Code	Location Name	Bin Code	Bin Name
WH_01	RM_Coil	RM_Coil	SS Coil 14/4	SS Coil 14/4
WH_01	RM_Patta	RM_Patta	SS Patta 14/4	SS Patta 14/4
WH_01	RM_Coil	RM_Coil	MS Coil 18/1	MS Coil 18/1
WH_01	RM_Coil	RM_Coil	SS Coil 18/8	SS Coil 18/8
WH_01	RM_Patta	RM_Patta	MS Patta 18/1	MS Patta 18/1

Item Group	Item Category	Item Type	Stock Type
Ferrous	SS 14/4	Raw Material	Unrestricted
Ferrous	SS 18/8	Raw Material	Blocked
Ferrous	MS 18/1	Raw Material	Scrap
Ferrous	SS 14/4	Finished Good	Unrestricted
Ferrous	SS 18/8	Finished Good	Unrestricted
Ferrous	MS 18/1	Finished Good	Damaged

### Benefits:

1. eXensys Inventory management provides inventory control through ABC classifications.
2. Developing the economic order quantity (EOQ) figure.
3. Identification of goods in terms of group, category, specifications.
4. Keep track of items so they can be found readily and easily.
5. eXensys helps in identifying the appropriate stock keeping units (SKU).

### Conclusion:

An inventory warehouse structure is a key part of the supply chain and primarily aims to control the movement and storage of materials within a warehouse and process the associated transactions, including shipping, receiving, put away and picking. The

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objective of a warehouse structure is to provide a set of procedures to handle the receipt of stock and returns into a warehouse facility, model and manage the logical representation of the physical storage facilities (e.g. bins etc), manage the stock within the facility and enable a seamless link to order processing and logistics management in order to pick, pack and ship product out of the facility.

