Stock levels

Meaning

Meaning of stock level everything which is used to make products, provide services and to run business is part of stock. Stock level is the different levels of stock required for effective control of materials at a retail store, to avoid over- and under-stocking of materials.

The purpose of material control is to keep the raw material stock as low as possible and at the same time be available when needed. To avoid excessive storage and stock shortages, the storekeeper must determine the stock level, also known as the supply and demand method of controlling the stock. In a scientific inventory control system the following levels of materials are fixed.

1. Re-order level

Re-order level is a level of material at which the storekeeper should initiate the purchase requisition for fresh supplies. When the stock-in-hand comes down to the re-ordering level, it is an indication that an action should be taken for replenishment or purchase.

The re-order level is calculated as follows:

Re-order Level= Minimum Level(Safety stock) + (Average lead time x Average consumption)

OR

Re-order Level= Maximum Consumption x Maximum Re-ordering Period

2. Minimum Level Or Safety Level

This represents the quantity which must be maintained in hand at all times. If stocks are less than the minimum level, then the work will stop due to shortage of materials.

Following factors are taken into account while deciding minimum stock level:

(I) Lead time:

The purchasing company takes time to process the order, and the supplier / seller needs time to process the order. The time it takes to process an order and then execute it is known as the time limit. It is necessary to maintain some stock during this period to meet production requirements.

(II) Consumption rate:

It is the average consumption of the elements of materials in the industry. The depreciation rate will be determined on the basis of past experience and production plans.

(III) Nature of the materials:

The nature of the material also affects the minimum. If the material is required only against the customer's special requests, a minimum stock will not be required for these materials. Wheldon gave the following formula to calculate the minimum stock level: minimum stock level = re-order level - (normal consumption x normal re-period period)

(IV) Rearrange the level:

When the quantity of materials reaches a certain level, a new order to purchase the materials is sent again. The request is sent before the materials reach the minimum stock level.

The rearrangement level has been fixed between minimum and maximum. The depreciation rate, the number of days required to replenish stocks and the maximum numbers of items required on any day are taken into account when determining the level of re-order.

The re-order level has been fixed as follows:

Re-order level = Maximum consumption rate x Maximum re-order period.

Illustration

Re-order Period = 8 to 12 days

Daily consumption = 400 to 600 units Minimum Level =?

Solution,

Minimum Level = Re-order Level – (Normal Consumption x Normal Re-order Point)

= 7200 – (500 x 10)

= 2200 units.

Working Notes:

1. Re-order Level = Maximum consumption x Maximum Re-order Point

= 600 x 12 = 7200 units

2. Normal consumption = (Maximum Consumption + Minimum Consumption)/2

= (600+400)/2 = 1000/2= 500 units

3. Normal Re-order Period = (Maximum Re-order Period + Minimum Re-order Period)/2

= (12+8)/2 = 10 days.

3. The maximum level:

It is the amount of materials that the company does not exceed its stock. If the quantity exceeds the maximum level, it will be described as overstock. The company avoids excessive storage because it will lead to higher material costs. Overcrowding will result in more capital, more storage space for materials, and more obsolescence losses.

4. Danger Level:

It is the level below which stocks should not fall in any case. If danger level approaches then immediate steps should taken to replenish the stocks even if more cost is incurred in arranging the materials. Danger level can be determined with the following formula:

Danger Level = Average Consumption x Maximum reorder period for emergency purchases.

The maximum inventory level depends on the following factors:

1. Availability of capital to purchase materials in the company.
2. Maximum material requirements at any time.
3. Provides space for storing materials as stock.
4. Average material consumption within the lead time.
5. The cost of warehouse maintenance.
6. The possibility of price fluctuations of different materials.
7. Nature of materials. If the material is inherently perishable, it cannot be stored for long periods.
8. Availability of materials. If materials are only available during seasons, they should be stored for the next period.

9. Restrictions imposed by the government. Sometimes, the government fixes the maximum amount of materials it could store as a concern. The threshold set by the government will become the determining factor and the maximum level cannot be determined beyond that threshold.
10. The possibility of changes in fashions will also affect the maximum level.

Wheldon suggested the following formula for calculating the maximum stock level:
Maximum inventory level = Re-order level + Re-order quantity - (Minimum consumption x Minimum re-order period)

5. Average stock Level

Average Stock level shows the average stock held by a firm. The average stock level can be calculated with the help of following formula.

Average Stock Level = Minimum Level + (1/2Re-order Quantity) OR

Average Stock Level = (Minimum Level + Maximum Level)/2

Illustration

Re-order quantity = 2000 units Minimum Level = 500 units Average stock level = ?

Solution,

Average stock level = Minimum level + 1/2 x Re-order quantity = 500 + 1/2 x 2000

= 500+ 1000

= 1500 units.