

## **UNIT COSTING (Theory)**

### **Meaning**

Unit costing is a method of costing in which the total cost of production for a given period is calculated and then divided by the total number of units produced during that period to find the **cost per unit**.

This method is most suitable for industries where:

- Only one type of product or service is produced,
- Units are identical in nature,
- Production is continuous, and
- The cost of each unit can be easily averaged.

For example: If a cement factory produces 10,000 bags of cement in a month at a total cost of ₹20,00,000, then:

$$\text{Cost per unit} = \frac{\text{₹}20,00,000}{10,000} = \text{₹}200 \text{ per bag}$$

### **Features**

1. **Homogeneous Product** – All units are identical in terms of size, shape, quality, and features.
2. **Continuous Production** – Goods are produced without interruption, usually in large volumes.
3. **Uniformity of Cost** – Each unit bears the same share of total cost.
4. **Use of Cost Sheet** – Main tool for presenting cost data.
5. **Total & Per-Unit Cost** – Both are ascertained for a given period.
6. **Mass Production** – Ideal for large-scale production of one product.

## Applicability

Used in industries/services such as:

- Cement manufacturing
- Brick works
- Mining and quarrying
- Oil refineries
- Paper mills
- Textile units
- Transport services (railways, buses, shipping)
- Power generation

## Objectives

1. **Ascertain cost per unit** for accurate costing.
2. **Assist in price fixation** based on reliable cost data.
3. **Control production costs** by detecting wastages and inefficiencies.
4. **Provide basis for tenders** and estimates for future orders.
5. **Measure efficiency** by comparing costs over time.

## Cost Sheet in Unit Costing

A cost sheet is a statement showing the total cost and cost per unit for a given period.

**Format (Simplified):**

| Particulars       | Total (₹) | Cost per Unit (₹) |
|-------------------|-----------|-------------------|
| <b>Prime Cost</b> |           |                   |
| Direct Material   | xxx       | xxx               |
| Direct Labour     | xxx       | xxx               |

|   |     |     |
|---|-----|-----|
| Direct Expenses                           | xxx | xxx |
| <b>Prime Cost</b>                         | xxx | xxx |
| Add: Factory Overheads                    | xxx | xxx |
| <b>Factory Cost</b>                       | xxx | xxx |
| Add: Office & Administration<br>Overheads | xxx | xxx |
| <b>Cost of Production</b>                 | xxx | xxx |
| Add: Selling & Distribution<br>Overheads  | xxx | xxx |
| <b>Cost of Sales</b>                      | xxx | xxx |

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## Formula

$$\text{Cost per unit} = \frac{\text{Total Cost}}{\text{Number of Units Produced}}$$

## Items Not Included in the Cost Sheet

Excluded items are purely financial or unrelated to production:

1. **Appropriations of profit** – e.g., dividends, reserves.
2. **Loss on sale of fixed assets.**
3. **Interest paid** on loans or capital.
4. **Income tax**, penalties, fines.
5. **Capital expenditure** like purchase of machinery.
6. **Donations and charity** unrelated to production.
7. **Abnormal losses** (e.g., goods destroyed by fire without insurance).

## Advantages

1. Simple and easy to apply.
2. Accurate cost per unit for decision-making.
3. Helps in cost control and efficiency improvement.
4. Reliable for preparing tenders and estimates.
5. Enables comparison of performance over time.

## Limitations

1. Not suitable for multiple products of varied specifications.
2. Requires accurate overhead allocation; errors may distort results.
3. Assumes uniformity of units, which may not hold in all cases.
4. Doesn't distinguish between variable and fixed costs unless specifically prepared.

## Important Notes & Assumptions for Sums

1. **If nothing is mentioned in the question:**
  - **Factory Overheads** → charged on the basis of **Direct Wages**.
  - **Office & Administration Overheads** → charged on the basis of **Factory Cost**.
  - **Selling & Distribution Overheads** → charged on the basis of **Units Sold** or **Cost of Production**, depending on the situation.
2. **For Estimated Cost Sheets**, if nothing is mentioned:
  - **Fixed Cost (Total)** will remain the same regardless of production volume.
  - **Variable Cost per unit** will remain the same, and total variable cost will change in proportion to output.