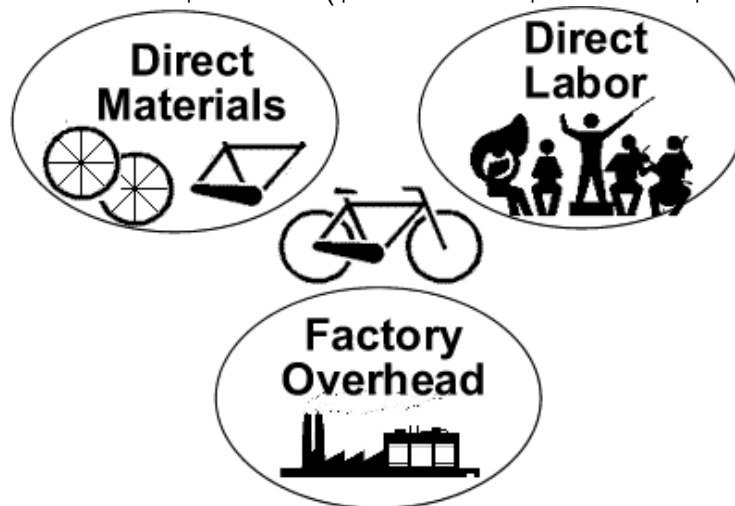


Cost of Goods Sold

The direct costs attributable to the production of the goods sold by a company. This amount includes the cost of the materials used in creating the good along with the direct labor costs used to produce the good. It excludes indirect expenses such as distribution costs and sales force costs. COGS appears on the income statement and can be deducted from revenue to calculate a company's gross margin. Also referred to as "cost of sales."

COGS is the costs that go into creating the products that a company sells; therefore, the only costs included in the measure are those that are directly tied to the production of the products. For example, the COGS for an automaker would include the material costs for the parts that go into making the car along with the labor costs used to put the car together. The cost of sending the cars to dealerships and the cost of the labor used to sell the car would be excluded. The exact costs included in the COGS calculation will differ from one type of business to another. The cost of goods attributed to a company's products are expensed as the company sells these goods. There are several ways to calculate COGS but one of the more basic ways is to start with the beginning inventory for the period and add the total amount of purchases made during the period then deducting the ending inventory. This calculation gives the total amount of inventory or, more specifically, the cost of this inventory, sold by the company during the period. Therefore, if a company starts with \$10 million in inventory, makes \$2 million in purchases and ends the period with \$9 million in inventory, the company's cost of goods for the period would be \$3 million ($\$10 \text{ million} + \$2 \text{ million} - \9 million).



How to Account for Cost of Goods Sold

The cost of goods sold (CoGS) for a period is the value of the inventory at the beginning of a plus the inventory purchases minus the value of the inventory at the end. This calculation is typically made at the end of each month, quarter or other reporting

period. Keeping track of inventory costs is an important part of staying on top of any business plan, so it's a good idea to stay on top of this measure.

Determine the beginning inventory value

This should always be the ending inventory value from the previous reporting period. If you are a seller, this number will consist of the cost of all the merchandise in your stock that you plan on selling to customers. If you are a manufacturer of goods, this number will consist of all the merchandise you plan on selling to merchants, as well as the cost of raw materials, work in progress, and other materials and supplies associated with your manufacturing.

For this example, assume the ending inventory from the previous period was \$20,000.

Add the value of all inventory purchases

This figure can be obtained by adding up the amounts from each invoice for products received during the month. Products received, but not yet invoiced, should be priced according to the purchase order. If you are a manufacturer, this includes the cost of all raw materials purchased for manufacture into a finished product, during this recording period.

- Assume your total inventory purchases for the period are \$10,000 for the purposes of this example.

Calculate the labor costs involved for manufacturing the goods.

- This figure will contain the wages and salaries of all manufacturing employees plus the cost of their benefits. Typically, wholesalers or resellers will not include the cost of labor in this figure, as it cannot be properly charged to the "cost" of the goods.
- For manufacturers, include all direct labor (those employees directly involved with building merchandise out of the raw materials) and indirect labor (employees who serve a necessary factory function, but not one directly involved with the manufacturing of goods). Administrative expenses are not included.
- For this example, manufacturing labor costs for this period were \$5,000.

Account for materials, supplies, and other costs of manufacturing.

For manufacturers, containers, the cost of freight, and the cost of overhead expenses like rent, heat, light, power, and other expenses associated with keeping manufacturing facilities open can be included in this figure.

Add these numbers together to determine the cost of goods available. This is the number from which you'll subtract the ending inventory to determine the CoGS.

\$20,000 (Beginning inventory) + \$10,000 (purchases) + \$5,000 (manufacturing labor costs) = \$35,000 Cost of Goods Available.

Determine the ending inventory value.

Calculating this value will depend upon the inventory tracking method used by your business. Some track using a First In, First Out (FIFO) method, which involves keeping inventory not every time purchases come in or out, but periodically throughout the period on a set timetable.

Say the ending inventory value in this example is \$15,000.

Subtract the ending inventory value from the cost of goods available.

The result will be the Cost of Goods Sold (CoGS).

$\$35,000 - \$15,000 = \$20,000$ COGS.

Calculation of CGS varies according to the nature of business. Either retailer, services or manufacturing business. We are going to discuss about the CGS of manufacturing business.

Performa OF CGS:

Direct Material:

opening material	xxx	
add purchases	xxx	
Purchase return	(xxx)	
add direct expenses	<u>xxx</u>	
Material available for use		xxx
less ending material		<u>(xxx)</u>
Direct material used		xxx
Add Direct labor		<u>xxx</u>
Prime cost		xxx
Add Factory overhead		<u>xxx</u>
Total factory cost		xxx
Add Opening WIP		<u>xxx</u>
cost of goods to be manufacturing		xxx
Less Ending WIP		<u>(xxx)</u>
cost of goods to be manufactured		xxx
Add Opening finished goods		<u>xxx</u>
cost of goods available for sale		xxx
Less Ending finished goods		<u>(xxx)</u>
Cost of goods sold at normal		xxx
+/- under/over applied FOH		<u>xxx</u>
Cost of goods sold at actual		<u>xxx</u>

Direct Material

The raw materials used in the creation of the final product is called direct material. For example glass is a direct material in light bulb manufacturing.



Direct Material Cost

The cost of materials used to complete a contract normally includes more than just the cost of the materials that actually become part of the product. Costs typically includes beginning inventory, purchases, purchases return or allowances, freight expense and ending inventory.

Beginning inventory

The book value of goods, inputs or materials available for use at the beginning of an inventory accounting period. BI is an important figure for companies, because they use it to gauge new ordering requirements and to forecast future sales.

Purchases

Purchases refers to purchase of new material and it is added to the BI.

Entry

Purchases

To

Account payable/ Cash

Purchases return

A purchase return occurs when a buyer returns merchandise that it has purchased from a supplier. It is subtracted from the cost of material.

Entry

Account payable/ Cash

To

Purchases

Freight expenses

These are the expenses incurred due to expense of freight or carriage in of raw material. It is also added in the cost of material



Ending inventory

It is the amount of inventory a company has in stock at the end of its fiscal year.

Calculation of Direct Material

Direct Material:

opening material	xxx	
add purchases	xxx	
less Purchase return	(xxx)	
add direct expenses		
freight in		
carriage in		
transportation cost	<u>xxx</u>	
Material available for use		xxx
less ending material		<u>(xxx)</u>
Direct material used		<u>xxx</u>

Matching Concept

Reason behind adding the opening and deducting the closing stock is matching concept, which says that relevant expenses should be recorded in the relevant period.

Labor

The aggregate of all human physical and mental effort used in creation of goods and services. Labor is a primary factor of production.



Types of labor cost.

The cost of labor is broken into direct and indirect costs.

Direct labor cost

The sum of all wages paid to employees, as well as the cost of employee benefits and payroll taxes paid by an employer to those employees whose work can be identified directly with the product manufacture.

Indirect labor cost

Indirect costs are associated with support labor, such as employees that maintain factory equipment but don't operate the machines themselves

Trend

Now a days manufacturing companies are becoming machine intensive and direct labor costs are gradually decreasing. It is not a major cost any more. For example the labor cost of nestle pakistan is approximately 2-3 % of total cost.

How to Calculate Labor Cost

Five steps are involved in calculating labor cost.

Step 1

Sort through the employee data and separate the employees by pay scales. For example, Firm A has five employees. Two of the employees make \$14 an hour, two employees make \$20 an hour and one employee has a salary of \$50,000 a year.

Step 2

Add together the total number of hours worked by pay scales for hourly employees. In the example, the \$14 an hour workers a total 90 hours this week. The \$20 an hour employees worked 100 hours this week.

Step 3

Multiply the hourly rate by the number of hours worked. In our example, \$14 an hour times 90 hours equals \$1,260 and \$20 an hour times 100 hours equals \$2,000.

Step 4

Divide any employee salaries by the time period. In the example, because a week is being analyzed, divide \$50,000 by 52 weeks. It is 52 weeks because there are 52 weeks in a year. So, \$50,000 divided by 52 weeks equals about \$962.

Step 5

Add the labor costs for each employee pay scale to find total labor costs. In the example, \$1,260 plus \$2,000 plus \$962 equals total labor costs of \$4,222 for Firm A's five employees for the week.

Prime cost

The direct labor cost is added in the direct material cost and sum of direct material cost and direct labor cost is called prime cost.

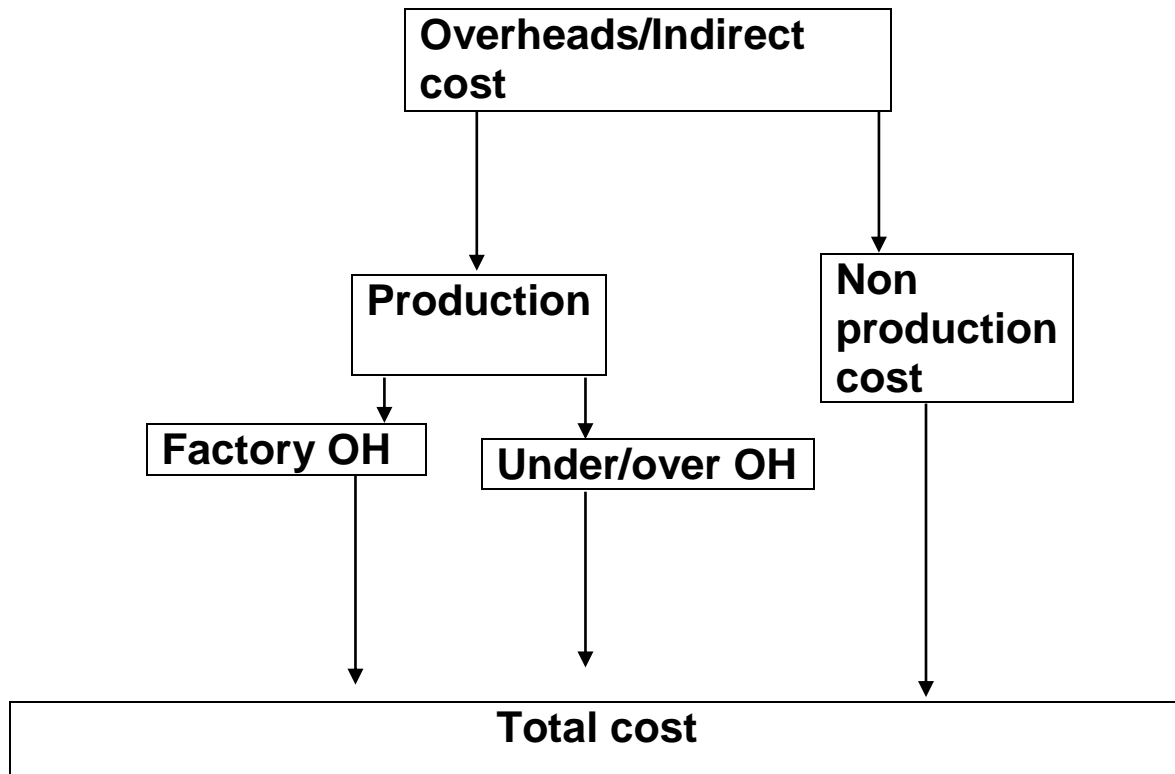
Factory OH

Factory overhead, also called manufacturing overhead or factory burden, is the total cost involved in operating all production facilities of a manufacturing business. It generally applies to indirect labor and indirect cost, it also includes all costs involved in manufacturing with the exception of the cost of raw materials and direct labor. Factory overhead also includes certain costs such as quality assurance costs, cleanup costs, and property insurance premiums

In FOH two types of factory overhead discussed.(1) FOH applied (2) FOH actual

FOH applied is an estimated overheads which rates mostly given according to previous records or on direct labor.

FOH actual means the actually expense which is incurred. There is no rate given about actual overheads. Actual cost must be given in classifications such as insurance expense, rent etc...



Under/over applied FOH

Over Applied

It means that the overheads charged to the cost of sales are greater than the overhead actually incurred.

Under Applied

It means that insufficient overheads have been included in the cost of sale.

At start or mid of the year company cannot wait for cost to be finalized and costing of the product is to be done. so company uses an estimated absorption rate for costing purpose and determine the appropriate sales process based on the company's cost markup and sales margin.

as to finalize the cost companies are using an estimated absorption rate thus resulting into under or over absorption of overhead after the cost have been finalized.

under absorption foh result in loses and over absorption overhead result in loss of customer because you are passing excessive cost to customers.

Recoding in CGS

Prime cost	xxx
Add FOH(Actual/applied)	<u>xxx</u>
Total factory cost	<u>xxx</u>

Component Of Factory Overhead



What things can come under this head

Indirect Material
 +
 Indirect Labor
 +
 Others Indirect Cost
 =
 Factory Overhead

Indirect Material

Factory Supplies
Lubricants and fuel

Indirect Labor

Supervision (factory supervisor salaries)
Superintendence (Salary)
Inspection team Salary
Salaries of factory clerks
Defective work salary
Experimental Work

Other Indirect Cost

Rent
Insurance Fire
Property Tax on factory Building
Depreciation of Plant and machinery
Maintenance and Repairs (Factory machinery, factory Building)
Power (factory)
Heat and Light of Factory
Employer Payroll
Factory Taxes
Miscellaneous Factory overhead
Small Tools

Conversion cost

Conversion cost is the sum of direct labour cost and the factory overhead cost/total factory cost.

Sometimes % is given that direct labour is 75% of conversion cost then we will easily find the amount of FOH which is 25% of conversion cost.

Direct labor cost	XXX
FOH	<u>XXX</u>
Conversion cost	<u>XXX</u>

Work in Process

Definition:

Material that has entered the production process but is not yet a finished product. Work in progress (WIP) therefore refers to all materials and partly finished products that are at various stages of the production process. WIP excludes inventory of raw materials at the start of the production cycle and finished products inventory at the end of the production cycle.

For accounting purposes, work in progress is considered as a current asset on the balance sheet. WIP is generally valued higher than raw materials, but significantly lower than finished products.

Work in Process Optimization:

Most companies strive to keep the actual amount of work in progress as low as possible, so as to reduce the amount of capital tied up in the production or manufacturing process. Another reason to keep WIP low is to reduce the risk of obsolescence, especially in fast-moving sectors such as technology and consumer electronics.

Optimal production management aims to minimize work in process. Work in process requires storage space, represents bound capital not available for investment and carries an inherent risk of earlier expiration of shelf life of the products. A queue leading to a production step shows that the step is well buffered for shortage in supplies from preceding steps, but may also indicate insufficient capacity to process the output from these preceding steps.

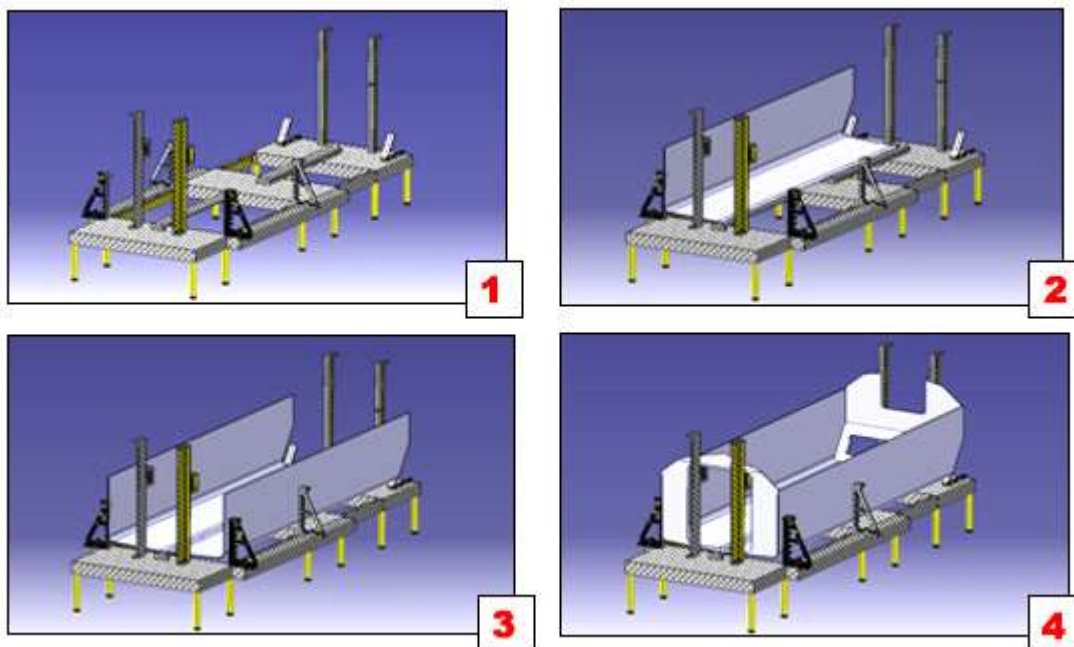
Just-in-time (acronym: JIT) production is a concept to reduce work in process with respect to a continuous configuration of product. Just in sequence (JIS) is a similar concept with respect to a scheduled variety in sequence of configurations for products.

The cost of work-in-process typically includes all of the raw material cost related to the final product, since raw materials are usually added at the beginning of the conversion process. Also, a portion of the direct labor cost and factory overhead will also be

assigned to work-in-process; more of these costs will be added as part of the remaining manufacturing process.

Calculation of Work in progress:

To calculate work in progress, separate raw materials and finished products from the materials that are being worked on. Calculate the level of completion for the volumes that are still in production and find the average completion for all the products resulting to each unit having that level of production. Calculate the overheads for production and apply the percentage level of completion of the overhead to the cost of the raw materials.



That part of a manufacturer's inventory that is in the production process and has not yet been completed and transferred to the finished goods inventory. This account contains the cost of the direct material, direct labor, and factory overhead placed into the products on the factory floor. A manufacturer must disclose in its financial statements the cost of its work-in-process as well as the cost of finished goods and materials on hand.

Process

The term “process” refers to linked activities with the purpose of producing a product (or service) for a customer (user) within or outside the organization. Generally, processes involve combinations of people, machines, tools, techniques, materials, and improvements in a defined series of steps or actions. Processes rarely operate in isolation and must be considered in relation to other processes that impact them. In some situations, processes might require adherence to a specific sequence of steps, with documentation (sometimes formal) of procedures and requirements, including well-defined measurement and control steps.



In many service situations, particularly when customers are directly involved in the service, process is used in a more general way (i.e., to spell out what must be done, possibly including a preferred or expected sequence). If a sequence is critical, the service needs to include information to help customers understand and follow the sequence. Such service processes also require guidance to the providers of those services on handling contingencies related to the possible actions or behaviors of those served.

In knowledge work, such as strategic planning, research, development, and analysis, process does not necessarily imply formal sequences of steps. Rather, process implies general understandings regarding competent performance, such as timing, options to be included, evaluation, and reporting. Sequences might arise as part of these understandings.

Steps involved

Costs are incurred by a manufacturing firm as it transforms materials into work in process and, ultimately, to finished products. The manufacturing firm consumes raw materials, labor and factory overhead during the manufacturing process in order to create both partially completed and fully completed units of inventory. Manufacturing costs are accumulated in the raw materials account, the work in process account, also known as work in progress account, and the finished products account. The inventory costs are debited to these inventory accounts until such time as the manufacturing process is complete or the completed inventory is sold.

Step 1

Determine the cost of beginning work in process for the accounting period. Work in process refers to raw materials inventory that has been only partially converted to finished products during a production process. The work in process inventory will undergo additional processing in order for it to be converted to finished products.

Step 2

Calculate the raw material inventory costs for the accounting period. Add the cost of the raw materials inventory at the beginning of the accounting period to the cost of purchased materials for the period to determine the total cost of the raw material inventory. From this figure, deduct the cost of raw material that is on hand at the end of the accounting period to determine the costs of materials consumed during the accounting period.

Related Reading: [How to Determine Overhead Applied to Work in Progress](#)

Step 3

Calculate the labor costs for the accounting period.

Step 4

Calculate the factory overhead costs for the accounting period. Include in this calculation such items as rent, depreciation costs, taxes and insurance.

Step 5

Calculate the manufacturing costs during the accounting period. Add together the raw material inventory costs, labor costs and factory overhead costs that are calculated in steps 3 through 5.

Step 6

Calculate the cost of ending work in process for the accounting period. Add the beginning work in process to manufacturing costs. From this total, subtract the cost of goods manufactured. For example, add \$10,000 beginning work in process to \$50,000 manufacturing costs for a sum of \$60,000. Next, subtract \$40,000 cost of goods manufactured from the combination of beginning work in process and manufacturing costs of \$60,000 for an ending work in process of \$20,000.

Step 7

Rework and scrap or accounting errors may impact the validity of the ending work in process figure that is determined using this formula. As a result, a physical count of work in process inventory can be performed in an effort to obtain a more accurate ending work in process figure.

How do you calculate beginning work in process inventory?

Beginning work in process + requested for manufacturing (direct material + direct labor + man. overhead) = cost of goods completed + ending work in process

Example Calculation of WIP inventory:

Suppose XYZ Company recorded the following information related to their inventory accounts for January:

January 1, 2003 January 31, 2003

Direct materials 10,000 17,000

Work in process 11,000 ?

Finished goods 16,000 9,000

Additional information is as follows:

Direct materials purchased \$19,000

Direct labor 15,000

Applied overhead 16,000

Operating income 30,000

S&A expenses 20,000

Sales revenue 90,000

Calculate the work in process inventory balance on January 31.

sales rev = 90 000

-CGS = X

-S&A = 20 000

opp income = 30 000

CGS: X = 40 000

Beginning Finished inventory = 16 000

+ CG Mfd = X

- Ending Finished inventory = 90 000

CGS = 40 000

CG Mfd: X = 33 000

Beg work in process = 11 000

+DM used = 12 000

+DL = 15 000

+app overhead = 16 000

-ending work in process = X

CG Mfd = 33 000

Ending Work in process X = 21 000

Conclusion:

Work in Progress Inventory is an important component in Goods Sold statement. Work in progress should be optimized as much possible to reduce tied up capital. WIP analysis allows a comprehensive review of manufacturing chain and implement Just-In-Time strategy.

Finished goods

Definition

Materials or products which have received the final increments of value through manufacturing or processing operations, and which are being held in inventory for delivery, sale, or use.

Finished goods are goods that have completed the manufacturing process but have not yet been sold or distributed to the end user.

A good purchased as a "raw material" goes into the manufacture of a product. A good only partially completed during the manufacturing process is called "work in process". When the good is completed as to manufacturing but not yet sold or distributed to the end-user, it is called a "finished good".

This is the last stage for the processing of goods. The goods are ready to be consumed or distributed. There is no processing required in term of the goods after this stage by the seller. Though there maybe instance that seller finished goods become buyer's raw materials

Finished goods are a relative term. In a Supply chain management flow, the finished goods of a supplier can constitute the raw material of a buyer.



Recording finished goods and cost of goods manufactured:

In a job order costing system, all manufacturing costs (i.e., direct materials, direct labor, and applied manufacturing overhead) of the job are debited to work in process account. When a job is completed, its cost (as shown by job cost sheet) is transferred from the work in process account to the finished goods account.

After completion, the job becomes finished goods and is, therefore, transferred from the production department to the finished goods storeroom (also called warehouse).

The following journal entry is made to transfer the cost of a completed job from work in process account to finished goods account:

Finished goods	xxx	
Work in process		xxx

The total cost transferred from the work in process account to the finished goods account during a period is equal to the cost of goods manufactured for that period. At the end of a period, the cost of incomplete jobs remains in the work in process account and is shown as “work in process inventory” in assets section of the balance sheet. Next period, this cost represents the opening balance of the work in process account.

Cost of goods sold:

When finished goods are shipped to customers, the cost of finished goods is transferred from finished goods account to cost of goods sold account. If a job is completed according to specification of a particular customer, the complete job is shipped to the customer immediately and the manufacturing cost associated with the job (as shown by the job cost sheet) is charged to the cost of goods sold. But in some cases, the complete job is not shipped but only a portion of the job is sold to customers. In such circumstances, the manufacturing cost per unit is computed and the cost of the units that have been shipped to customers is charged to cost of goods sold account.

Sales and the transfer of cost from finished goods to cost of goods sold account are recorded by making the following journal entries:

When sales are made:

If sales are made on account

Accounts receivables	xxx
Sales	xxx

If sales are made on cash

Cash	xxx
Sales	xxx

When cost is transferred to cost of goods sold account:

Cost of goods sold	xxx
Finished goods	xxx

The Finished Goods Inventory Formula

The simple formula for calculating finished goods inventory is:

Beginning Finished Goods Inventory + Cost of Goods Manufactured – Cost of Goods Sold = the Ending

Finished Goods Inventory Amount.

But what do the numbers in the formula mean?

The beginning finished goods inventory is found on the balance sheet. It is the prior period's ending finished goods amount. Add to that amount the cost of goods manufactured to come up with the total goods available for sale. Deduct the cost of goods sold and there you have it: the ending finished goods inventory. Sounds simple right? Well there is only one hitch in our get-along. You guessed it: how do we calculate

cost of goods manufactured? The numbers used in the following example are fictional. Their only purpose is to illustrate the cost of goods manufactured calculation:

Manufacturing companies must understand the amount of finished goods they have available for sale. It is an important factor in determining profitability and knowing what the inventory levels are. Tracking inventory is also an important step in deterring possible theft within the company by implementing control systems. These types of control systems are required by the Sarbanes-Oxley Act, a topic for another day. As you can see in the examples shown above, several concepts play into learning how to calculate ending finished goods inventory, such as the cost of goods sold formula.

How to Determine the Balance in the Finished Goods Inventory Account

The finished goods inventory account represents the value of all goods available for sale.

More Articles

- [What Is the Offset of an Inventory Reserve Account?](#)
- [Stages Of Inventory](#)
- [How to Account for Inventory on Taxes](#)
- [Accounting Methods for Obsolete Inventory by GAAP](#)

Finished goods are manufactured items that are ready to sell to customers. Manufacturing businesses begin with raw materials and apply direct labor to them to transform them into finished goods. Calculating the finished goods inventory balance is often done at the end of each quarter. But it can be computed at any time, if necessary, based on just a few pieces of information.

Unit Cost Method

Step 1

Calculate the cost per unit of finished goods inventory. To do this, you must add the costs of direct materials, direct labor and the amount of factory overhead allocated to each part for the total unit cost. For example, if you have a direct material cost of \$5, a direct labor cost of \$10, and a \$3 factory overhead cost to produce a finished product, your cost per unit is \$18.

Step 2

Determine how many units of finished goods inventory are in stock. This information can be obtained by physical inventory counts, or by the following formula: Add the

number of units in finished goods inventory at the beginning of the period to the number of units finished during the period, then subtract the number of units sold during the period. For example, if you had 50,000 units in finished goods to begin with, and finished 25,000 more during the period, you have a total of 75,000 units to sell. If you sold 45,000 units, your ending number is 30,000 units in finished goods.

Related Reading: Types of Inventory for the Balance Sheet of a Manufacturing Company

Step 3

Multiply the number of units in finished goods inventory by the unit cost. In this example, 30,000 units multiplied by a unit cost of \$18 would be \$540,000 in finished goods inventory.

Account Method

Step 1

Look up the ending finished goods inventory amount from the previous accounting period. This information can be found on the balance sheet. For this example, assume the previous ending inventory was \$900,000.

Step 2

Add the cost of goods manufactured to the beginning inventory amount. To get the cost of goods manufactured, add up the cost of raw materials, the cost of direct labor and the cost of factory overhead. Add the result to the period's beginning balance for finished goods inventory. For example, if the cost of goods manufactured in the current period is \$450,000, add that to beginning finished goods inventory of \$900,000 for a total of \$1,350,000.

Step 3

Subtract the cost of goods sold from the total of beginning finished goods and cost of good manufactured. If the cost of goods sold was \$810,000, for example, the calculation would be \$1,350,000 minus \$810,000 for \$540,000 in finished goods inventory.

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