Freight and Landed Costs:
Managing Landed Costs

SAP Business One Version 9.3

SAP Run Simple

Welcome to the topic on how to manage costs. We will look at how to estimate and track actual landed costs. Then we will review how landed costs are set up.

Objectives

At the end of this topic, you will be able to:

- Understand how landed costs are tracked in business processes
- Set up customs group and landed cost charges used in landed cost documents

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In this topic, we will first discuss how landed costs are tracked in a business process. Then we will set up customs groups and landed cost charges for use in landed cost documents.

Business Scenario

- A large part of your company's business is importing goods from overseas and selling locally.
- When goods arrive to the port, additional charges must be paid, before you can release the goods to your warehouse.
- These charges include customs duty and additional expenses for storage and shipping.
- In order for your Cost of Goods Sold accounting to be correct, these additional charges must be embedded in the item's cost

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What are Landed Costs?

Landed Costs are additional expenses that may apply during the import of goods.
These costs are in addition to customs duties that you pay for importing items.

Landed Costs may include

- Shipping
- Insurance
- Storage

The landed costs document will help you estimate and track customs duties and landed costs so that you can capture these costs in the unit cost of items and optionally affect pricing.

- First let's define what landed costs are.
- When items are imported, you often pay customs duties on top of the cost of merchandise. A customs duty is a tariff or tax imposed on goods when the goods are transported across international borders.
- In addition to customs duties, additional expenses may apply during the import of goods.
- Expenses such as shipping, insurance and storage are considered landed costs.
- You can use the landed cost document to help you estimate and track customs duties and landed costs so that you can capture these expenses and update the inventory unit cost of the items you purchase.
- You can also choose to update a price list of your choice as well as last purchase price.
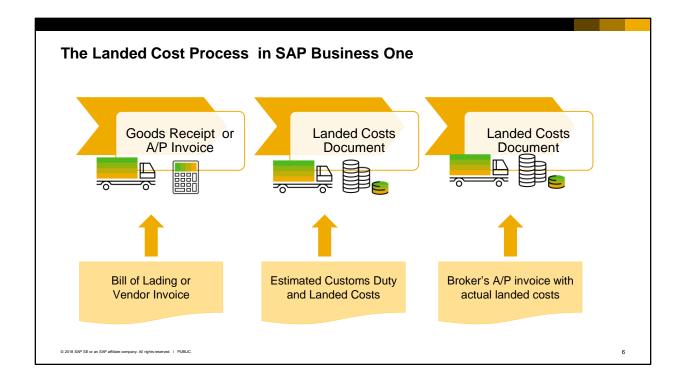
Distributing Landed Costs

- You can choose how the landed costs are distributed.
- For example, an overseas order might have additional insurance and shipping costs.
- Some costs may be distributed by cost and others by weight.

Insurance
Distributed by Price
Cost 10

Shipping
Distributed by Weight
Cost 120

Item	Quantity	Price	Weight
AB100	1	500	1 Kilo
BB150	1	200	3 Kilo
CD390	2	300	2 Kilo

Insurance	Shipping
5	20
2	60
3	40

- When landed costs are entered you can choose how the landed costs are distributed.
- For example, insurance is often based on the value of an item so you may wish to have the insurance cost distributed to the items based on the cost of each item.
- On the other hand, shipping costs are typically based on weight or volume. Therefore you are likely to choose one of those methods for distributing shipping charges across several different items.

The Landed Cost Process in SAP Business One

Goods Receipt or A/P Invoice	Landed Costs Document	Landed Costs Document
↑	↑	↑
Bill of Lading or Vendor Invoice	Estimated Customs Duty and Landed Costs	Broker's A/P invoice with actual landed costs

- Let's take a look at the landed cost process in SAP Business One.
- Once you receive a notice that the items have arrived to the port, you start by issuing either a Goods Receipt PO or an A/P invoice. You must record the customs duties and any additional cost related to this import.
- The landed cost is based on the goods receipt PO or the A/P invoice. Each item must have a customs group assigned to it, which is associated with a percentage, to calculate the customs amount. Note that basing landed cost on AP invoice is only supported in a perpetual inventory system.
- Optionally, additional expenses such as shipping and storage can be applied to the landed cost document. The customs and landed cost expenses are allocated to each unit, and are added to adjust the item cost, so the unit cost reflects the additional expenses paid in addition to the purchase price that appears in the goods receipt PO or A/P invoice.
- The broker is a third party vendor who charges you customs and landed costs. The broker issues a separate A/P invoice based on the landed cost document.
- In some cases, you don't know the final charges, so you may create a landed cost document, with an estimated amount for customs and landed costs. Later, once you get the final amounts, you can copy the landed cost to a second landed cost document to adjust the amounts.

Landed Costs Example

- We have ordered 3 new tablet items from our vendor
- When the items arrive, we receive them on a Goods Receipt PO
- All three items are the same weight and volume
- However they have different prices

Item Z00002	Item Z00004	Item Z00005
Tablet PC - 64 GB Data Storage	Tablet PC - 128 GB Data Storage	Tablet PC - 256 GB Data Storage
Vendor Price: 300	Vendor Price: 400	Vendor Price: 600

- We will look at a simple example with landed costs.
- In this case, we have ordered three new tablet items from a vendor.
- We receive the items on our goods receipt PO, but we do not yet have the shipping, insurance and storage costs.
- The three items are the same weight and volume, but they vary in price.
- We will use a landed costs document to add those costs and allocate them appropriately.

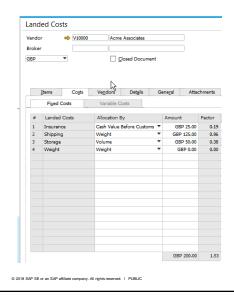## Creating a Landed Costs Document

- We enter the vendor code into a new Landed Costs document,
  then use *Copy From* to bring in information from the Goods Receipt PO.
- Information for the items, prices, weight and volume is copied into the document.
- The Expenditure and Allocation Cost Value columns will fill in automatically based on
  allocation setup once costs are entered.
- Items Tab:

#	Item No.	Qty	Weight	Volume	Base Doc Price	Base Doc Value	Expenditure	Allocation Cost Value
1	Z00002	10	4000g	10	300	3000	?	?
2	Z00004	10	4000g	10	400	4000	?	?
3	Z00005	10	4000g	10	600	6000	?	?

- We enter the vendor code into a new Landed Costs document, then use Copy From to bring in information from the Goods Receipt PO.
- Information on the items, prices, weight and volume is copied into the document.
- The Expenditure and Allocation Cost Value columns will fill in when we add landed costs into the document.

Entering Landed Costs

Landed Costs

Vendor	V10000	Acme Associates
Broker		
GBP		☐ Closed Document

Items | **Costs** | Vendors | Details | General | Attachments

Fixed Costs | Variable Costs

#	Landed Costs	Allocation By	Amount	Factor
1	Insurance	Cash Value Before Customs ▼	GBP 25.00	0.19
2	Shipping	Weight ▼	GBP 125.00	0.96
3	Storage	Volume ▼	GBP 50.00	0.38
4	Weight	Weight ▼	GBP 0.00	0.00
			GBP 200.00	1.53

- We received invoices for insurance, shipping and storage during transit
- We enter the amounts on the *Costs* tab.
- Our company has landed costs categories preset with allocation methods
- In our system:
  - Insurance is based on item price
  - Shipping is allocated based on item weight
  - Storage is based on item volume

- We have received invoices for insurance, shipping and storage during transit.
- We enter the amounts into the appropriate categories on the Costs tab.
- Notice that each type of costs has been set up in our system to be allocated based on a different quality of the items.
  - Insurance is allocated based on price
  - Shipping is allocated based on weight
  - Storage is allocated based on volume
- These allocations can be changed inside the landed costs document if needed.

Automatic Allocation

- After entering the costs, we return to the Items tab to see the changes.
- The total costs for insurance, shipping and storage have been distributed to the rows.
- The *Allocation Costs* column shows what is actually being allocated to each row.
- The *Expenditure* column gives you the allocation by unit.

#	Item No.	Qty	Weight	Volume	Base Doc Price	Base Doc Value	Expenditure	Allocation Cost Value
1	Z00002	10	4000g	10	300	3000	6.41	64.11
2	Z00004	10	4000g	10	400	4000	6.60	66.01
3	Z00005	10	4000g	10	600	6000	6.99	69.88

- After entering the costs, we return to the Items tab and see the changes.
- The total costs of 200 have been distributed.
- The *Allocation Costs* column shows what is actually being allocated to each row.
- The Expenditure column shows the allocation per unit.

Effect in Accounting

- In the journal entry, we see the total landed costs are:
  - debited to the inventory account, and
  - credited to a landed costs allocation account.

- These costs are then added into the base price to come up with anew warehouse print for the item.

G/L Account	Account Name	Debit	Credit
132000	Electronics	200	
208080	Landed Costs allocation		200

- When we pay the invoices for insurance, shipping and storage, we will enter those costs into the appropriate accounts payable expense accounts.
- Then we credit accounts payable instead of debiting shipping expense, we debit landed costs to zero these costs out.

- In the journal entry for the landed costs, we see the total additional landed costs are debited to the inventory account and credited to a landed costs allocation account.
- The costs have been added into the base price to come up with a new warehouse cost price for the item.
- When we pay the invoices for insurance, shipping and storage, we will enter those costs into the appropriate accounts payable expense accounts. Then we credit accounts payable instead of debiting shipping expense, we debit landed costs to zero these costs out.
- Note that in a non-perpetual company, no journal entry is created when adding the landed cost.
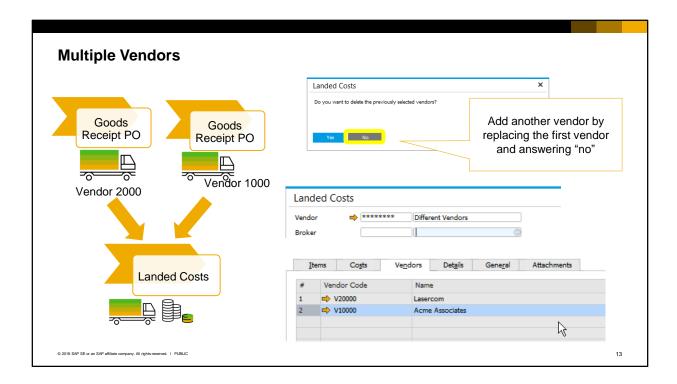
Effect on Last Purchase Price

- Landed costs can also affect the last purchase price and other price lists

- On the *Details* tab in the *Landed Costs* document, we can view the updated last purchase price which now includes landed costs.

- Landed costs can also affect the last purchase price and other price lists.
- On the *Details* tab in the *Landed Costs* document, we can view the updated last purchase price which now includes the landed costs.
- Note that when the *Expenditure* field states **No,** then the landed cost row freight amount will not affect this item's cost.

Multiple Vendors

Goods Receipt PO — Vendor 2000

Goods Receipt PO — Vendor 1000

Landed Costs

Landed Costs

Do you want to delete the previously selected vendors?

Yes / No

Add another vendor by replacing the first vendor and answering "no"

Landed Costs

Vendor ➡ ******** Different Vendors
Broker

| Items | Costs | Vendors | Details | General | Attachments |

#	Vendor Code	Name
1	➡ V20000	Lasercom
2	➡ V10000	Acme Associates

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- Landed costs might come in from more than one vendor. For example, you might have two different shipments associated with the order that come from two different vendors, or even copy two different purchasing documents into the same landed costs document.
- Copy in the first goods receipt (or A/P invoice) with the first vendor, then replace the vendor at the header of the Landed Costs document. The system asks if you wish to delete the first vendor. Answer "no" and you will see "Different vendors" appear in the vendor field.
- All vendors will appear on the Vendors tab.

Define Customs Groups

SAP

We will start setting up landing costs by defining customs groups.

What is Customs Duty?

- Customs duty is a tariff or tax imposed on goods when transported across international borders

- Each item type has a specific duty rate which is determined by a number of factors, including where you acquired the item, where it was made, and what it is made of.

- The customs duty rate is a percentage. This percentage is determined by the total purchased value of the items paid at a foreign country

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- What is customs duty?
- Customs duty is a tariff or tax imposed on goods when the goods are transported across international borders
- Each item type has a specific duty rate which is determined by a number of factors, including where you acquired the item, where it was made, and what it is made of.
- The customs duty rate is a percentage. This percentage is determined by the total purchased value of the items paid at a foreign country
- Remember that every county has different regulations regarding customs, therefore you must follow the local requirements when working with customs duties.

Customs Groups in SAP Business One

Customs Groups:

- Reflect a projected percentage of the purchase price to calculate customs duty expenses
- Affect the inventory unit cost
- Affect a price list of your choice and last purchase price
- Are assigned to the item master data record.

- You need to define customs groups in SAP Business One based on the type of items you are importing from foreign countries
- Each group reflects a projected percentage of the purchase price to calculate customs duty expenses.
- When the landed cost document is created, you can choose that customs affect the inventory unit cost.
- In addition, custom duties can affect a price list of your choice and last purchase price.
- Customs groups are assigned to the item master data record in the *Purchasing* tab.

Define Customs Groups

Administration → Setup → Inventory → Customs Groups

Name	Customs %	Purchase %	Other %	Total %	Allocation account	Expense Account
Vehicle	5	0.5	1	5.53	Allocation	Expenses
Electronics				4	Allocation	Expenses

- As explained earlier, customs charges vary based on the type of items you are importing, for example vehicles, electronics, food and beverage. For each type of duty charges, create a different customs group.
- Enter the name of the customs group.
- The customs, purchase and other columns, are percentages that represent the breakdown of the customs charges.
- The total column, displays the total percent that is used in the landed cost document, to calculate customs amounts. This column is calculated based on the preceding 3 columns using a specific formula based on customs requirements.
- Alternatively you can simply enter the total percentage in the total column.
- In our scenario, you are importing Vehicles and Electronics. Each has different customs duties, therefore you need to set up two customs groups.
- These groups, needs to be assigned to the item master data after they are created.
- In the last two columns, define the customs allocation and expense accounts. These are used when landed cost document is added to the system, and when the broker invoice is posted.

Define Customs Groups – Account setup

Landed cost with NO effect on inventory:

Account	Debit	Credit
Customs allocation		10
Custom Expenses	10	

Landed cost that affect inventory:

Account	Debit	Credit
Customs allocation		10
Inventory	10	

Broker's invoice (A/P invoice based on landed cost)

Account	Debit	Credit
Customs allocation	10	
Broker (Vendor)		10

- Let us talk about how the 2 accounts are used in the accounting system.
- The customs expense account should be set up as an expense type in the chart of accounts. It is used when customs do not affect inventory.
- Once you add the landed cost document, the customs expense account is debited and the customs allocation account is credited.
- When you post a landed cost document that affects inventory, the customs allocation account is credited and the inventory account is debited.
- Later, when you create the broker's A/P invoice, and you base it on the landed cost document, the customs allocation is cleared and its balance zeroes out.
- Since the customs account is a clearing account, it can be set up under the liabilities, with the other inventory variance accounts.
- To indicate whether or not customs should affect inventory or not, check the box *Custom Affect Inventory* in the *Items* tab of the *Landed Cost* document. When this check box is NOT selected then the customs amount is posted to the customs expense account.

Define Landed Costs

Next we define landed costs.

Define Landed Costs

Administration → Setup → Purchasing → Landed Costs

Code	Name	Allocation By	Landed Cost Alloc. Account
01	Insurance	Cash value before customs	Liability Account
02	Shipping	Weight	Liability Account

- You can define landed costs in the setup menu for purchasing.
- First, you define a code and a name for the expense.
- Since a landed cost is entered as one amount, you need to decide how this amount is allocated between items in the landed cost document. There are 6 allocation methods available. These are explained in the next slide.
- A liability account needs to be defined per expense. This account is used as an allocation account when the landed cost document is added. The entry is cleared once the A/P invoice from the broker is entered. In the upcoming slide, you will see an example of the automatic journal entry.
- As you can see, there are no amounts of percentages in the setup for landed costs, as well as no item affiliations. Those are entered in the landed cost document itself.

Define Landed Costs - Allocation Methods

There are 6 possible ways to allocate landed cost amounts between items on a landed cost document:

Cash Value Before Customs	Proportionate unit price determined by comparing the total before customs amount was applied
Cash Value After Customs	Proportionate unit price determined by comparing the total after customs amount was applied
Quantity	Percentage based on each item's quantity, out of the total quantity in the landed cost document
Weight	Percentage based on each item's weight, out of the total weight in the landed cost document
Volume	Percentage of each item's volume, out of the total volume in the landed cost document
Equal	Equal percentage for each unit in the landed cost document

There are 6 possible way to allocate landed cost amounts between the items included in the landed cost document:
- ✓ Cash value before customs – calculates the proportionate unit price, compare to the total, before customs amount was applied
- ✓ Cash value after customs - calculates the proportionate unit price, compare to the total, after customs amount was applied
- ✓ Quantity – calculates the proportionate percentage of each item's quantity, out of the total quantity in the landed cost documents
- ✓ Weight - calculates the proportionate percentage of each item's weight, out of the total weight in the landed cost documents. The weight must be defined in the item master data.
- ✓ Volume - calculates the proportionate percentage of each item's volume, out of the total volume in the landed cost documents. The volume must be defined in the item master data.
- ✓ Equal – allocate an equal amount for each single unit in the landed cost document.

The allocation methods are for your discretion. For example, it is common sense to base insurance expenses on the cash value, but storage is most likely to be tied to the items' volume. Shipping could be related to the items weight or volume.
Expenses like security would probably be divided equally, since security is unlikely to vary due to factors relating to each item's characteristics.
Note that the allocation method can be modified in the landed cost document as needed for exceptional cases.

Define Landed Costs– Accounting Transactions

Landed Cost Document

Account	Debit	Credit
Inventory Finished Goods	10	
Landed Cost Allocation		10

Broker's invoice (A/P invoice based on landed cost)

Account	Debit	Credit
Landed Cost Allocation	10	
Broker (Vendor)		10

- Let's take a closer look at the allocation account.
- When the landed cost document is added, the inventory finished goods account is debited, the landed cost allocation account gets credited.
- Later, when the broker invoices is added based on the landed cost document, the account is cleared and debited, the vendor gets credited.
- Therefore the landed cost allocation account's balance represent the total landed costs posted, but not billed by the broker.

Customs versus Landed Cost expenses

	Customs	Landed Costs
Mandatory?	Depending on local regulations and type of items you import	Depending on expenses incur until items were released
Where to assign?	Item master data	Landed Cost Document
Amount or percentage?	Percentage on the item's purchase price	Total amount for the landed cost document
Effect on unit cost?	Optional	Yes
Affect price list?	Optional	Optional
A/P invoice from broker needed?	Yes	Yes

- Now we have reviewed all the setup entries for landed cost, here is a summary showing the differences between customs and landed cost charges.
- Is it mandatory? Customs expenses are mostly mandatory on the majority items. Some items may be duty free, but this depends on the local country's regulations.
- Landed cost is not mandatory. It depends on the type of expenses you incur during the import process, how long the items stay in the port, if is there a need to insure the items until they get released, and will you be charged for storage and other expenses.
- You assign a customs group to the particular item, but landed cost expenses are entered only in the landed cost document.
- Customs is calculated as a percentage of the item's purchase price, and landed cost is entered as one amount that is allocated to the items in the document based on the selected allocation method.
- Customs can affect inventory unit cost if you choose, but if you enter any landed costs, they will affect inventory unit cost.
- It is optional to affect a price list with both options.
- Lastly, if customs and landed cost are entered, an A/P invoice for the broker needs to be entered based on the landed cost document to complete the process.
- If we go back to the business scenario we discussed at the beginning, according to the company's requirements, both customs group and landed cost must be set up, both must affect inventory, and once you have completed the landed cost, an A/P invoice from the broker should be added based on the landed cost document.

Test your knowledge – Landed Cost Setup

Where do you assign a customs group?

1. Warehouse master data

2. Item master data

3. Landed Cost document

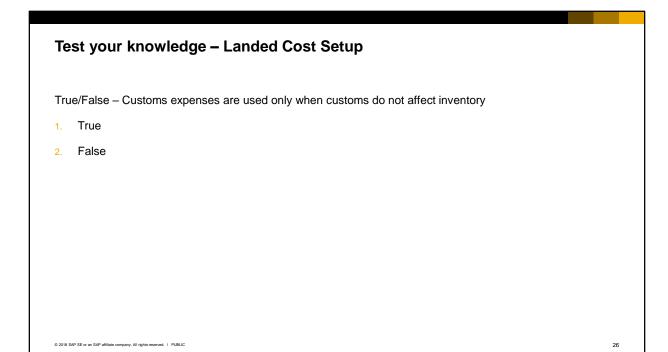4. Vendor master data

Test your knowledge on landed cost setup:
Where do you assign a customs group?
1. Warehouse master data
2. Item master data
3. Landed Cost document
4. Vendor master data

Test your knowledge – Landed Cost Setup

Where do you assign Customs Group

1. Warehouse master data

2. <mark>Item master data</mark>

3. Landed Cost document

4. Vendor master data

Correct answer: Item Master Data

Test your knowledge – Landed Cost Setup

True/False – Customs expenses are used only when customs do not affect inventory

1. True
2. False

True or False: Customs expenses are only used when customs to not affect inventory?

Test your knowledge – Landed Cost Setup

True/False – Customs expenses are used only when customs do not affect inventory

1. True
2. <mark>False</mark>

Correct answer: False

Test your knowledge – Landed Cost Setup

True/False – Landed cost allocation methods can only be defined in the landed cost setup

1. True
2. False

True or False: Landed cost allocation methods can only be defined in the landed cost setup?

Test your knowledge – Landed Cost Setup

True/False – Landed cost allocation method can only be defined in the landed cost setup

1. True
2. False

False.

Summary

Here are some key points to take away:

- Landed cost is used in companies that import goods from foreign countries.
- The main purpose of using landed costs is to see and record the effect of additional import expenses on the item's unit cost.
- Customs groups and landed costs must be set up with the corresponding general ledger accounts to enable automatic journal entries.
- Landed costs can also be used to affect last purchase price or any other price list.

Here are some key points to take away:
- Landed cost is used in companies that import goods from foreign countries.
- The main purpose of the tracking landed cost is to see and record the effect of additional import expenses on the item's unit cost.
- Customs groups and landed costs must be setup with the corresponding general ledger accounts to enable automatic journal entries.
- Landed costs can also be used to affect last purchase price or any other price list.