

Avanade Purchase Surcharges and Deductions

User Documentation

Dynamics 365 for finance and operations

Food & Beverages Meat Industry ISV Solution



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Avanade Purchase Surcharges and Deductions

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1. Introduction

Avanade Surcharges and Deductions for purchases provides the inputs required to prepare the recipe with the food and beverages industry on the raw materials that are used to produce the finished product, can have attributes such as Fat content, Percentage weight, Trading classifications and Quality information. The recipe that is produced from the other raw materials can have other attributes such as fat and ph.

Avanade Surcharges and Deductions for purchases provides the required solution of calculating the purchase cost with useful extensions of various functions and reports within the Procurement and Accounts Payable modules of Dynamics 365 for Finance and Operations, Enterprise Edition.

2. Functional Overview

2.1 Batch attributes - Batch attributes considered for calculation

Batch attributes are characteristics of raw materials and finished products that make up inventory batches. Batch attributes can vary, depending on factors such as environmental conditions, the quality of the raw materials that are used to produce the batch, or the outcome of the finished product. The number and types of batch attributes that are used can vary widely from one industry to another.

Navigation Path: Inventory Management -> Setup -> Batch -> Batch attributes

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The screenshot shows the Dynamics 365 interface for configuring a batch attribute. The main window is titled 'Batch attributes' and displays the configuration for an attribute named 'Concentration'. The attribute is of type 'Integer' and has a description of 'Concentration Percentage'. The 'Values' section is highlighted with an orange box and contains the following fields: 'Tolerance action' set to 'Warning', 'Minimum' set to 10, 'Maximum' set to 30, and 'Increment' set to 1. The 'Target' field is set to 25. The 'Find purchase price' toggle is turned on (Yes), and the 'Find discount purchase price' toggle is turned off (No). The left-hand navigation pane shows a list of attributes, with 'Concentration' selected and highlighted with an orange box.

In the cheese industry, milk, which is one of the raw materials that are used to produce the cheese, can have attributes such as fat content and percentage weight. The cheese that is produced from the milk can have other attributes, such as moisture and age.

- In the steel industry, the iron that is produced might have attributes such as the percentages of magnesium content, silver content, and zinc content.
- To better manage the number and types of attributes, you can use batch attribute groups. In this way, you don't have to add each attribute individually.

You can assign batch attributes to individual products that are held in inventory batches, or you can assign them to products that are associated with specific customers. Before you can assign a batch attribute at the customer level, you must assign it at the product level. The product must have the batch dimension set to Active in the tracking dimension group. To assign a batch attribute to an individual product, use the product-specific page.

If the attribute is specific to a product for a customer, use the customer-specific page. When you add an attribute to a product, you also define other parameters such as the minimum and maximum ranges for an attribute of the Integer or Fraction type or the tolerance actions for an attribute of the Integer or Fraction type

2.2 Batch attributes groups – Batch attributes based on classification

After attributes have been defined, they can be assigned to attribute groups. An attribute group is used to group the individual attributes for a component or subcomponent in a product configuration model.

Navigation Path: Inventory Management -> Setup -> Batch -> Batch attribute groups.

The screenshot shows the Dynamics 365 interface for configuring batch attribute groups. The breadcrumb navigation is 'Batch attribute groups'. The left sidebar lists attributes: 'Age on day', 'Fat Class', 'pH', 'pH New', and 'Trade Class'. The main area is titled 'COW CARCASSES : COW CARCASSES GROUP' and 'Group attributes'. It shows a table with one attribute: 'Age on day' with description 'Age on day'. Below this, the 'Values' section is configured with: 'Tolerance action' set to 'Warning', 'Target' set to '30', 'Minimum' set to '10', 'Maximum' set to '30', and 'Increment' set to '10'. There are two toggle switches: 'Find purch price' is set to 'Yes' (checked), and 'Find discount purch price' is set to 'No' (unchecked).

An attribute can be included in more than one attribute group. Attribute groups can help users configure products, because the various selections are arranged in a specific context. Attribute groups can be assigned to retail categories or retail channels.

The target value for the attribute. This value is the optimal value of the attribute, and it applies to all attribute types.

You can also set default values for attributes that are included in an attribute group. Batch attribute groups, which are groups of attributes that may share common characteristics or other similarities. When you assign an attribute group to an item, all attributes in that group apply to the item.

2.3 Batch Attribute Combination group

In the case where we wanted to derive the surcharge price calculation of the product based on the attributes, Batch attribute combination group is used to arrive at the surcharge price calculation with the definition of attribute values of the form,

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Within the D365 for Finance and Operations, Enterprise Edition standard, Ranges can be specified in the Batch attribute form but if you want to assign value to the attribute value that is considered for calculation we use the Batch attribute combination group.

Path: Procurement and Sourcing -> Setup -> Batch attribute combination

The screenshot displays the Dynamics 365 Finance and Operations interface for setting up a Batch combination group. The left-hand navigation pane shows a list of groups, with 'BCC1 Batch Combination group 1' selected. The main content area shows the details for 'BCC1', including a table of 'BATCH COMBINATION ATTRIBUTES'. The table has the following data:

Attribute	Attribute type	From Value	To Value	Attribute value
P Age On Day	Integer	1	30	25
P Fat Class	Integer	0	15	12
P Ossification	Integer	1	50	40
P PH	Fraction	1	8	5
P Trade Class	String	0	0	A

Batch combination group defines the surcharges definition of deriving the surcharge breakup based on the attributes influencing the surcharges from the Batch attributes to derive the price applicable to the item.

Normally Batch attributes defined will be used in the Batch attributes combination is derived from the Batch attributes group form where the Batch combinations are used in the trade agreement that we define for a Specific Batch Attributes Combination.

2.4 Discount combination group

Discount group combination is defined on variable ranges varied based on attribute groups defined and the discounts are applied. Positive factors associate to surcharges and Negative factors relate to the deductions.

Navigation Path: Procurement and Sourcing->Setup -> Discount group combination

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Dynamics 365 Finance and Operations Procurement and sourcing > Setup > Discount group combination USMF

Save + New Delete OPTIONS

Filter

DC1
Discount combination group 1

DC2
Discount Combination group 2

DC3
Discount Combination group 3

Disc1
Disc1

Disc3
Disc3

Discount group combination

Attributes discount Id: Disc3 Description: Disc3

Details

Valid from: 5/27/2018 Valid to: 5/27/2018

SURCHARGE/DISCOUNT RANGES

+ Add Remove

Range id	Amount	Attribute group
Range4	-3.00	Hiefer Carcasses
Range2	-2.00	Hiefer Carcasses
Range6	-1.50	Hiefer Carcasses
Range5	1.00	Cow Carcasses
Range1	2.00	Hiefer Carcasses
Range3	3.00	Hiefer Carcasses
Range7	4.50	Hiefer Carcasses

DISCOUNT ATTRIBUTES

Attribute	Attribute type	From Value	To Value	Attribute value
P Ossification	Integer	10	15	
P PH	Fraction	1	8	
P Trade Class	String	0	0	O

2.5 Trade agreements for surcharges and deductions combination

Trade agreements are fixed price or discount agreements that are set up for one or more customers or vendors for the sale or purchase of individual or multiple products. They are applied to quotes, orders, and invoices according to a set of built-in rules to determine the valid price and/or discount" (Trade Agreements).

The various kinds of trade agreements most used for sales and purchases both, are:

- 1) Price
- 2) Line Discount
- 3) Multiline Discount
- 4) Total Discount Setup.

Before we can start creating trade agreements, some setups need to be done.

Activating the price/discount is done using the following

Navigation path: Procurement and sourcing > Setup > Price and discounts > Activate price/discount (for Purchase Orders).

The screenshot shows the Dynamics 365 Finance and Operations interface for 'Journal lines, trade agreement'. The table below represents the data shown in the 'Overview' section.

Ch...	Relation	P...	Product ...	Item relation	Site	W...	From	To	U...	Amount ...	Currency	Attributes combination Id	Attributes discount Id
✓	Price (purch.)	All	Table	Hiefer	1	11	1.00	5,000.00	ea	12.00	USD	BCC9	Disc4
✓	Price (purch.)	All	Table	Hiefer	1	11	1.00	5,000.00	ea	16.00	USD	BCC10	Disc4
✓	Price (purch.)	All	Table	Hiefer	1	11	1.00	5,000.00	ea	14.00	USD	BCC8	Disc4

The 'Details' section shows the following configuration:

- From date: 6/1/2018
- To date: 6/1/2018
- Price charges: 1.00
- Price unit: 1.00
- Discount percentage 1: 0.00
- Discount percentage 2: 0.00
- Lead time: 0
- Working days: No (toggle off)
- Disregard lead time: Yes (toggle on)

2.6 Excel import format definitions

Normally different Batch attributes for determining the purchase price comes to the bay door for collection of stock for performing quality check process and registering the product is usually done with help of different interfaces. These Interfaces are integrated with the Item Batch Registration.

For this surcharges and deductions solution there is an integration with excel interface which will dynamically update the prices and performs the calculations against each batch attribute defined per batch combination group and discount group combination. Here in this the business user will be able to create more customized excel formats with which he can determine with which batch attributes to be considered for import of records.

The design for excel import has been further improved to parameterize and suit to any industry isv solution which is the excel import type.

Navigation path: Procurement and sourcing -> Setup -> Excel format

The screenshot shows the Dynamics 365 Finance and Operations interface. The top navigation bar includes 'Dynamics 365', 'Finance and Operations', and 'Procurement > > Excel format USMF'. The left sidebar has a 'Filter' search box and a list of industry categories: 'Chemicals', 'Farm Cow', and 'Metal'. 'Farm Cow' is selected and highlighted with an orange box. The main content area is titled 'Excel format setup' (also highlighted with an orange box). It contains two input fields: 'File import type' with the value 'Farm Cow' and 'Description' with the value 'Dairy Industry'. Below these is a 'Details' section with '+ Add' and '- Remove' buttons. A table is displayed with the following data:

✓	Target field name	Excel field name ↑
	CategoryId	Category
	ColdWeight	ColdWeight
	P Fat Class	Fat
	HotWeight	HotWeight
	P Ossification	Ossification
	P PH	pH Value
	P Trade Class	Trade

Alternatively, we can use Data Management workspace where in we can also use the data entities related to batch attributes framework but from us excel import interface is having more detailed design interface as per the business need and industry requirements.



Demo sample batch import.xlsx

2.7 Item batch registration process

The products which are defined in Batches for the registration process is implemented in this Item Batch Registration process. There can be multiple interfaces to import the batch information records based on the attributes for calculating the price for surcharges and deductions for purchases.

We use excel import format for importing the item batch attribute records because it is easy to track, import and review the records.

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Navigation Path: Accounts Payable > All Purchase Orders > Purchase Order Lines > Tab Inventory -> view -> Item Batch Registration.

00000550 : HIEFER
Item batch registration

00000550 : 1001 : Domestic

✓	Sequential Id	File import type	Serial number	Assesment weight	Processed weight	Category	Assesment date time	Processed date time	Unit price	Surcharge amount	Discount	Net amount	Register
	USMF-000026	Cow	SER-0000061	180.00	180.00	Cow	6/1/2018 01:3...	6/1/2018 01:3...	14.00	2.00	-8.50	1,350.00	<input type="checkbox"/>
	USMF-000027	Cow	SER-0000062	140.00	135.00	Cow	6/1/2018 01:35:0...	6/1/2018 01:35:0...	12.00	6.50	-2.50	2,240.00	<input type="checkbox"/>
	USMF-000028	Cow	SER-0000063	100.00	95.00	Cow	6/1/2018 01:35:0...	6/1/2018 01:35:0...	16.00	1.00	0.00	1,700.00	<input type="checkbox"/>

ATTRIBUTES

✓	Attribute	Attribute value	Find discount p...	Find purch price
	P Age On Day	24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	P Fat Class	8	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	P Ossification	30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	P PH	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	P Trade Class	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

DISCOUNT ATTRIBUTES

✓	Attributes combination Id	Attributes discount Id	Discount amount	Range id
	BCC8	Disc4	2.00	Range1
	BCC8	Disc4	-2.00	Range7
	BCC8	Disc4	-4.00	Range8
	BCC8	Disc4	-2.50	Range10

As and when the attributes got imported it will perform the internal calculation by which it will update the surcharge amount and discount that is applied based on the attribute values defined in the batch combination group and discount group defined based on the ranges that is setup earlier.

From the above we can clearly observe that the Ranges defined in positive amounts cumulative will be the surcharge amount while the negative amounts cumulative will be the discounts amount.

The Attribute value that is defined is clearly mentioned in the item batch registration form where the Find discount price and Find purch price always refers to the surcharges and deductions that is being applied to the item batch attributes.

2.8 Batch attributes calculation summary preview report

2.9 Automatic and manual registration of batch attributes

We can also perform the item batch registration which can be viewable in inventory transactions by the parameter setup at the Procurement and Sourcing Parameters form for Auto Registration or Manual Registration. If check box for Auto Registration is selected in the parameters form item batch attribute line as a transaction gets automatically registered otherwise we need to perform a manual registration after the import of the attribute based records.

Navigation Path: Procurement and Sourcing -> Setup -> Procurement and Sourcing Parameters.

Dynamics 365 Finance and Operations USMF

Save OPTIONS

Procurement and sourcing parameters

General

Delivery

Prices

Request for quotation

Rebate program

Number sequences

Margin alerts

Inventory dimensions

Set up default values and parameters for purchase orders

CHANGE MANAGEMENT FOR PURCHASE ORDERS

Activate change management
No

Allow override of settings per vendor
Yes

INTERCOMPANY PURCHASE ORDER FROM ORIGINAL SALES ORDER

Find purchase agreements
Yes

PATH FOR IMPORTING LIVESTOCK ATTRIBUTE INFORMATION

Select file path
E:\Users\Administrator\Docume...

Auto register
Yes

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2.10 Indicative purchase price calculation based on attributes

Purchase price calculation is updated based on the number of units of quantity that is registered as average unit price of different quantities using the recalculate pricing and updates the net surcharges and deductions as well

The screenshot displays the Dynamics 365 Finance and Operations interface for a purchase order. The top navigation bar includes 'Dynamics 365', 'Finance and Operations', and the breadcrumb 'Accounts payable > Purchase orders > All purchase orders'. The 'Recalculate pricing' button is highlighted with an orange box. Below the navigation, the 'Item batch registration' page shows a table of 'Purchase order lines'. The table has columns for Item number, Product name, Price group, Site, Warehouse, CW quantity, CW unit, Quantity, Unit, Unit price, and Net amount. The first row shows item '1 Hiefer' with a unit price of 12.60, which is also highlighted with an orange box. Below the table, the 'Line details' section is shown with tabs for 'General', 'Setup', 'Address', 'Product', 'Delivery', 'Picking', 'Price and discount', 'Project', 'Product packages', 'Variants', 'Foreign trade', and 'Fixed asset'. The 'Price and discount' tab is selected and highlighted with an orange box. This tab contains several input fields: 'DISCOUNT' (Discount, Multiline discount, Multiline discount percentage, Discount percentage), 'PRICES' (Price unit, Charges on purchases, Attribute-based pricing ID), and 'SURCHARGE AND DEDUCTIONS' (Discount, Surcharge amount). The 'SURCHARGE AND DEDUCTIONS' section is highlighted with an orange box, showing a discount of -11.00 and a surcharge amount of 9.50.

i...	Item number	Product name	Price group	Li...	Pr...	V...	Site	Warehouse	CW quantity	CW unit	Quantity	Unit	Unit price	A...	D...	Di...	Net amount
1	Hiefer	Hiefer	Domestic				1	11	20	ea	1,000.00	ea	12.60	0...			12,595.24

Price and discount

DISCOUNT

Discount:

Discount percentage:

Multiline discount:

Multiline discount percentage:

PRICES

Price unit:

Charges on purchases:

Attribute-based pricing ID:

Adjusted unit price: 0.00000

Adjusted net amount: 0.00

SURCHARGE AND DEDUCTIONS

Discount:

Surcharge amount:

2.10.1 Re-calculation of purchase price in the purchase order

2.10.2 Inquiry of item batch attributes registered transactions

2.10.3 Purchase invoicing and Batch Attributes summary report

3. Workspace for Fixed Assets

Avanade Surcharges and Deductions Asset Workspace provides the 360° cockpit view of the underlying business functionalities throughout Dynamics 365 for Finance & Operations, enterprise edition application for all procurement modules.

The screenshot displays the Dynamics 365 interface for 'Slaughter house management'. The top navigation bar includes 'Dynamics 365', 'Finance and Operations', and 'Slaughter house management'. The main content area is divided into three sections:

- Summary:** A dashboard with four cards showing '0' for 'Total slaughters per day', 'Total slaughters per month', 'Cattle slaughters per day', and 'Pig slaughters per day'.
- Item batch registration:** A table with columns: Serial number, Assessment weight, Assessment date time, Unit price, Discount, and Net amount. The table contains six rows of data.
- Links:** A vertical pane on the right with sections for 'Orders' (Released products, All purchase orders, Trade agreement journals, Item batch registration) and 'Setup' (Batch attributes, Batch attribute groups, Trade agreement journal names, Batch combination group, Discount group combination, Excel format).

Serial number	Assessment weight	Assessment date time	Unit price	Discount	Net amount
✓ SerSteel123	2.00	5/30/2018 10:34:46 AM	0.00	0.00	0.00
SerSteel124	3.00	5/31/2018 04:57:58 AM	0.00	0.00	0.00
SerSteel125	4.00	5/31/2018 05:43:48 AM	0.00	0.00	0.00
SER-0000061	180.00	6/1/2018 01:34:59 PM	14.00	-8.50	1,350.00
SER-0000062	140.00	6/1/2018 01:35:00 PM	12.00	-2.50	2,240.00
SER-0000063	100.00	6/1/2018 01:35:00 PM	16.00	0.00	1,700.00

4. License Configuration

Navigation Path: System administration > Setup > License configuration

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The screenshot shows the Dynamics 365 interface for 'License configuration' under 'Finance and Operations'. The page title is 'License configuration' and it has two tabs: 'Configuration keys' and 'Configuration key groups'. A list of configuration keys is displayed, with 'Avanade meat industry configuration key' highlighted and its checkbox checked. Other checked items include 'Administration', 'Bank', 'Case online request configuration key', 'Correspondence', 'Cost accounting', 'Country/Regional specific features', 'Currency', 'Data import export framework', 'Data validation checklist', 'Database Log', 'Development', 'Electronic banking', and 'Email approval'. A yellow warning banner at the top states: 'This form is read-only unless the system is in the maintenance mode. Maintenance mode can be enabled in this environment by running maintenance job from LCS'.

Avanade surcharges and deductions access must be activated.