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FreeFlow® Web Services Tax Calculation and Configuration Using Excel

Powered by Press-sense

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Changes are periodically made to this document. Changes, technical inaccuracies, and typographical errors will be corrected in subsequent editions.

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Introduction

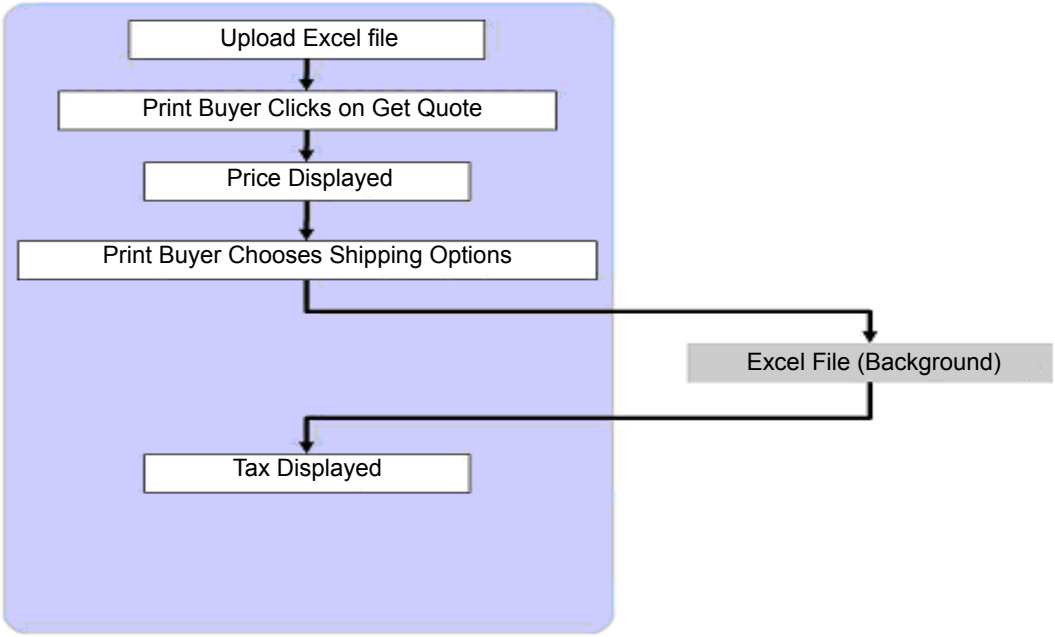
Complex tax regulations, set in place by various countries throughout the world, can impede accurate tax calculation for Jobs ordered through *FreeFlow Web Services*. The *Tax Calculation and Configuration Using Excel* option has therefore been developed for Print Providers requiring accurate tax calculation in light of complex tax regulations.

Tax Calculation and Configuration Using Excel option enables the Print Provider to upload an Excel file that contains all tax parameters and then assign the file to be used for tax calculations on the system level.

Note: Working with an Excel file allows flexibility in the calculations (i.e. any formula or any information that will generate the specific price can be employed).

Working with Excel File

To work with a *Tax Excel* file, the Print Provider must first create an appropriate Excel file and then upload the file to the *FreeFlow Web Services* system. When a Print Buyer chooses the *Shipping Options* and clicks on **Continue**, all relevant information related to each Job in the order, as well as customer and shipping information , is exported from the *Web Services* system (in the background of the Excel file). The Excel file receives the new information and, according to the formulas that the Print Provider provides, updates and calculates the tax. The tax is automatically imported back to the *Web Services* system, where it is displayed to the Print Buyer.



Working with the *Tax Calculation and Configuration Using Excel* option, the Print Provider can base his calculations on such additional parameters as *Zip Code*, *Job Type*, and *Customer*. The Print Provider can also define multiple tax rates according to these parameters.

Settings in the *FreeFlow Web Services* system

Settings in the *FreeFlow Web Services* System describes the interaction between *FreeFlow Web Services* and the *Tax Excel* file that will be used.

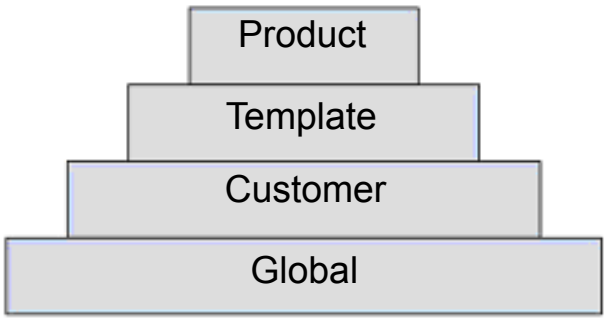
The following issues are covered:

- Tax Models: The position of the *Tax Excel* sheet in the *FreeFlow Web Services* tax models
- Uploading/Downloading the *Tax Excel* file

Tax Models

FreeFlow Web Services supports a 4-level tax model. This mechanism comes into action whenever a Print Buyer clicks on the **Next** button, after choosing the *Shipping Options*. In order to calculate and display the price, the system employs one of the following four tax methods:

- Product
- Template
- Customer
- Global



The *FreeFlow Web Services Tax model* is hierarchical:

- The system first examines whether a *Product* tax has been set (defined while setting *Manual* pricing for a specific Job). If a *Product* tax has been set, the system will use this tax in the price calculation of this product
- If a *Product* tax has not been set, the system searches for *Template* tax (defined while setting *Template* pricing for a specific template)
- If a *Template* tax has not been set, the system searches for *Customer* tax (defined under **Customers**/ **Preferences**)
- If *Customer* tax has not been set, the system calculates the tax according to the *Global* tax (defined under **Settings**/ **Pricing**).

The *Tax Excel* calculation is carried out on the *Global* level. The system behavior regarding the tax model is different when using *Tax Excel*. Therefore, two explanations are provided in this section:

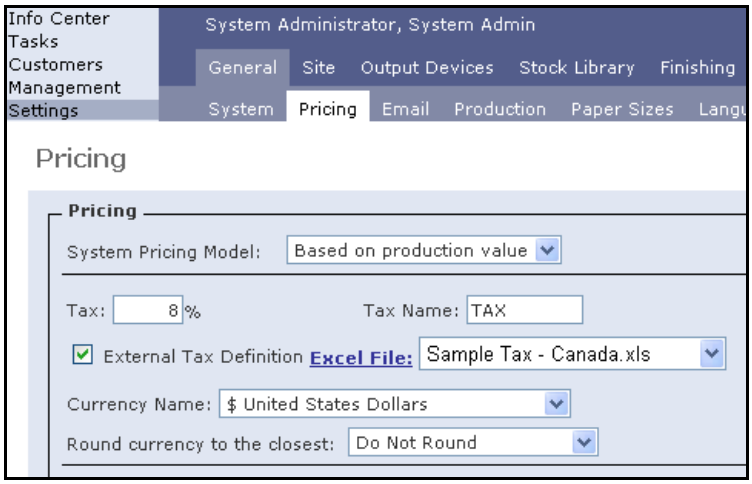
Tax Model Using Tax Excel Sheet

The *Tax Excel* sheet is accessed at the *Global* level. Unlike the *Tax Model without using Excel Tax*, *Tax Excel* always displays to the Print Buyer the tax name, rate and amount which were defined in the *Tax Excel* file. When the tax is defined at any level other than in the Excel (*Product*, *Template*, *Customer*, *System Global*), this information will be exported to the *Tax Excel* file, so it can be taken under consideration while creating the Excel file that will be used for the *Tax* calculations. For more information, *see "Tax Excel File Format" on page 6*.

Assigning a Tax Excel Sheet

Assigning a *Tax Excel* file is possible only from the Print Provider side. To assign a *Tax Excel* file, carry out the following steps:

1. Log in as a Print Provider and go to **Setting**/**General**/**Pricing**.
2. Select the **External Tax Definition** checkbox; the **Excel File** link and dropdown box appear.
3. Select the appropriate Excel file from the dropdown box.

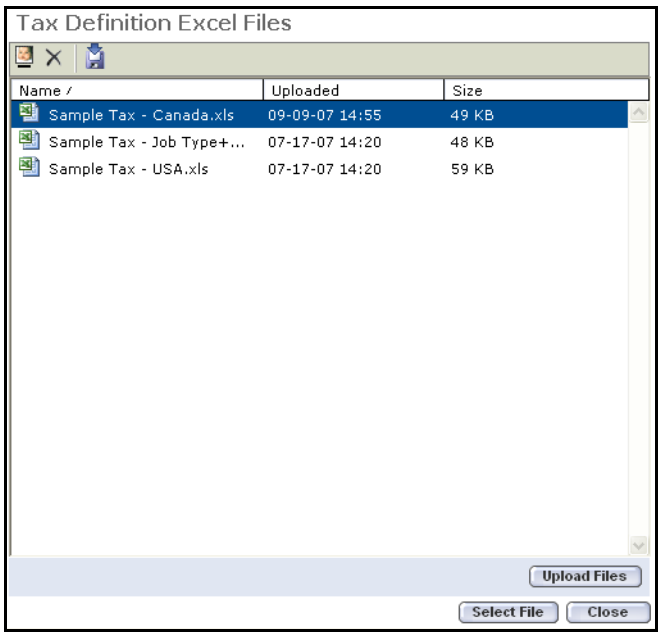


Uploading/Downloading the Tax Excel File

FreeFlow Web Services provides an option for uploading an Excel file to the system for the purpose of calculating taxes.

The number of files that can be uploaded is unlimited; however, only one Excel file can be used at a time. To upload a *Tax Excel* file to the system, carry out the following steps:

- Click on the **Excel File** link; the ***Tax Definitions Excel Files*** dialog box appears and displays all of the Excel files that exist within the *Web Services* system.



Note:

1. *Sample Tax - Canada.xls*, *Sample Tax - Job Type+Customers.xls* and *Sample Tax USA.xls* are samples files provided with the system; it is important not to delete these files as they provide the Excel file format that will be used for creating new Excel tax sheets for the purpose of tailoring tax calculations. For further information, *see "Tax Excel File Format" on page 6*.
2. The ***Tax Definitions Excel Files*** dialog box enables uploading and downloading Excel files and selecting a *Tax Excel* file that will be used for the *Tax* calculations.

Tax Definitions Excel Files Dialog Box Description

Operation Buttons

- **Upload Files** - Enables uploading an Excel file
- **Select File** - Allows enabling a specific Excel file to the selected customer
- **Close** - Closes the ***Tax Definitions Excel Files*** dialog box

Pricing Excel File Toolbar

Change Icon		Enables changing the selected Excel file name
Delete File		Enables deleting the selected Excel file
Download File		Enables downloading the selected Excel file from the list to a target folder

Tax Excel File Format

FreeFlow Web Services provides the following three Excel sample files (available with *FreeFlow Web Services V6.0*):

- Sample Tax - Canada.xls
- Sample Tax - Job Type+Customers.xls
- Sample Tax USA.xls

Note: The above samples are based on the same format; however, each differs in the method of tax calculation.

The *Tax Excel* file has a special format, parts of which cannot be altered. The following section provides a comprehensive description of the file format, in order to assist the Print Provider in creating tax calculations with the *Excel Tax Model*.

Note:
1. The main concept of the Excel file format is found in the *Sample Tax - Canada.xls* sample file.
2. The *Tax Excel* sample files contain two sheets: *Info* and *Calculation*. These Excel sheets cannot be renamed or deleted and must be present when creating the Excel file.

Calculation Sheet

The *Calculation* Sheet contains the following four columns:

- Column A - Fields names that are exported from *Web Services*
- Column B - Values that are exported from *Web Services*
- Column C - Fields names that are imported to *Web Services*
- Column D - Values that are imported to *Web Services*

Note: *Columns A* and *B* must not be modified. Limited changes can be made to *Column C* (description is provided under the *Column C* paragraph). *Column D* values are set according to your calculation methodology.

Column A

Column A contains 120 *Job Property*, shipping information and Print Buyer information field names, all of which are exported from *FreeFlow Web Services*.

The following table describes each of these fields:

Field Names	Description
ShipToStreet	The street that the Job must be delivered to
ShipToCity	The city that the Job must be delivered to
ShipToState	The state that the Job must be delivered to
ShipToZipCode	The *Zip Code* that the Job must be delivered to
ShipToCountry	The country that the Job must be delivered to
GlobalTaxName	Other *Tax Name* that defines tax on a lower level
GlobalTaxPercentage	Other *Tax Percentage* that defines tax on a lower level
GlobalTaxType	The level of the other tax; it can either be: *Product*, *Template*, *Customer*, *Global* (in this hierarchical order)
PrintProviderStreet	The Print Provider's street address
PrintProviderCity	The Print Provider's city
PrintProviderState	The Print Provider's state
PrintProviderZipCode	The Print Provider's *Zip Code*
PrintProviderCountry	The Print Provider's country
JobID	Unique Job# generated by the system
JobName	*Job Name*, as it appears in the *Shopping Cart*
JobStatusID	*Job Status ID*, as it appears in the database
JobStatusName	*Job Status*
CustomerRefCode	*Reference Code* that the customer entered
JobTypeID	*Job Type ID*
JobTypeName	*Job Type name*, as defined in the *Job Type* library
Binding	*Binding* style that was chosen for a *Book Assembly* Job
Material	Material that was chosen for *Book Assembly* Job
JobSubtypeID	*Job Subtype ID*
JobSubtypeName	*Job Subtype name* as defined in the *Job Type* library
Total Copies	Number of copies of the Job that were defined to be delivered
Delivery Copies	The number of copies to be delivered to the current address. This option is for multiple shipping addresses; for each address, the data is exported to the file with the correct number of copies.
FlatCount	Number of original Job pages (for one copy), without folding

FlatWidth	Job's original page width (without folding)
FlatHeight	Job's original page height (without folding)
FlatSize	Job's page size (without folding)
FlatOrientation	Job's page orientation
FlatSides	Job's sides
PageCount	Number of folded counts for this Job (for one copy)
PageWidth	The Job width after folding
PageHeight	The Job height after folding
PaperCategory	The *Paper Category* (according to which the Job will be printed) as was defined in the *Stock Library*
PaperTexture	The *Paper Texture* (according to which the Job will be printed) as was defined in the *Stock Library*
PaperBrand	The *Paper Brand* (according to which the Job will be printed) as was defined in the *Stock Library*
PaperColor	The *Paper Color* (according to which the Job will be printed) as was defined in the *Stock Library*
PaperWeight	The *Paper Weight* (according to which the Job will be printed) as was defined in the *Stock Library*
OutputDeviceID	*Printer ID* that was assigned automatically by the system
OutputDeviceName	Name of printer that was automatically assigned by the system
PrintQualityID	*Print Quality ID* as defined by the Print Provider
PrintQualityName	*Print Quality Name*, defined by the Print Provider (cost effective, high quality)
ColorGroup	The *Job Color Details*: *Process* or *B/W*
BlackColorCount	If *B/W*, according to the Job's properties
ProcessColorCount	Number of *Process Colors*, according to the Job's properties
SpotColorCount	Number of *Spot Colors*, according to the Job's properties
RequiredDate	The delivery date
UrgencyID	*Urgency ID*, according to system definition
UrgencyRate	*Urgency Rate*, according to system definition
Urgency Price	*Urgency Price*
PdfFlatCount	Number of Job pages (for one copy) without folding, after converting to *PDF*
PdfFlatWidth	Job's original page width (without folding) after converting to *PDF*
PdfFlatHeight	Job's original page height (without folding) after *PDF* conversion
PdfBlackColorCount	If *B/W*, after conversion to *PDF*

PdfProcessColorCount	Number of processes after conversion to *PDF*
PdfSpotColorCount	Number of spot colors after conversion to *PDF*
PdfBlackAndWhitePageCount	Number of *B/W* Job pages
PdfColorPageCount	Number of *Process* Job pages
VardataCount	Number of records (VI) for this Job
HasIForm	Is this a *Form* Job?
CustomerID	*Customer ID* (generated by the system while creating a customer)
CostCenterID	*Cost Center ID*
CustomerName	Print Buyer name
CustomerDiscountRate	Print Buyer discount rate (as set in *Preferences*)
CustomerTaxRate	Print Buyer Tax Rate (as set in *Preferences*)
StaplingType	*Stapling* type (as defined for this Job)
StaplingPosition	*Stapling* position (as defined for this Job)
StapleCount	*Staple* count (as defined for this Job)
CombBindingType	*Comb Binding* type (as defined for this Job)
CombBindingPosition	*Comb Binding* position (as defined for this Job)
CombThickness	*Comb Binding* thickness (as defined for this Job in inches)
LaminatingTexture	Laminating texture
LaminatingSides	Laminating sides (one-side or two-sides)
DrillingPosition	*Drilling* position (as defined for this Job)
DrillingRadius	*Drilling* radius (as defined for this Job in inches)
DrillingHoleCount	*Drilling Hole* counts (as defined for this Job)
CollatingType	*Collating* (if defined for this Job)
PerfectBindingType	*Perfect Binding* type (as defined for this Job)
PerfectBindingPosition	*Perfect Binding* position (as defined for this Job)
NumberingType	*Numbering* type (as defined for this Job)
NumberingPosition	*Numbering* position (as defined for this Job)
NumberingSides	*Numbering* sided
HasCustomFinishing	Does this Job have *Custom Finishing*?
CustomFinishingName	*Custom Finishing* name
CustomFinishingPricePerCopy	Price that was set for *Customer Finishing*
CustomFinishingDescription	*Custom Finishing* description
FoldCount	Number of folds in the Job (for one copy)
ParentSheetSize	*Parent Sheet* size

ParentSheetWidth	*Parent Sheet* width
ParentSheetHeight	*Parent Sheet* height
OrderDate	The required date of the order
Cost	Cost for the Print Provider
Price	Customer price, without tax and discount
AdjustedPrice	Customer price, including a negative discount
CustomerPrice	Customer price, including a positive discount
TotalNoTax	The total price, without tax
ProductTaxName	If there is a *Product Tax*, the name appears here
ProductTaxPercentage	If there is a *Product Tax*, the rate appears here
TemplateTaxName	If there is a *Template Tax*, the name appears here
TemplateTaxPercentage	If there is a *Template Tax*, the rate appears here
CustomerTaxName	If there is a *Customer Tax*, the name appears here
CustomerTaxPercentage	If there is a *Customer Tax*, the rate appears here
SiteTaxName	If there is a *Global Tax*, the name appears here
SiteTaxPercentage	If there is a *Global Tax*, the rate appears here
UserFirstName	First name of the user who ordered this Job
UserLastName	Last name of the user who ordered this Job
UserStreet	Street of the user who ordered this Job
UserState	State of the user who ordered this Job
UserZipCode	*Zip Code* of the user, who ordered this Job
UserCountry	Country of the user who ordered this Job
BillingFirstName	First name, as it appears in the *Billing Address*
BillingLastName	Last name, as appears in the *Billing Address*
BillingStreet	Street, as appears in the *Billing Address*
BillingState	State name, as appears in the *Billing Address*
BillingZipCode	Zip Code, as appears in the *Billing Address*
BillingCountry	Country, as appears in the *Billing Address*
ShippingMethod	*Shipping Method* that was chosen for this Job

Column B

Column B contains the values that are exported from *Web Services,* for each Job of a specific order. These values are exported when the Print Buyer clicks on the **Next** button, after choosing from the *Shipping options*.

Important Note:

- Measurement Values - All sizes that are exported to the Excel file are in inches, even when the default language is other than EnglishUS. Therefore, there is a need to convert these values to millimeters using a simple Excel formula (for example, Cell B33 is in inches. In order to convert the value to millimeters, the formula B33*25.4 is used).
- Field Format - Excel provides an option for setting the cell format. This option changes the view but not the value. In the Excel file provided with the system, all cells are set to *General*. To change the cell format, right-click on the cell and choose the appropriate format cell from the menu.

Column C

Column C contains seven field names (*see "Example: Excel File Info, Columns C and D" on page 14*), which are imported to *FreeFlow Web Services*.

Note:

1. The number of fields in this column is unlimited and each Print Provider can define as many tax names, percentages and amounts, as is necessary and according to the tax calculations.
2. The following table provides an explanation of the *Column C* fields (according to the *Sample Tax - Canada.xls* file):

Field Names	Description
Tax1Name	*Tax Name* that will be returned to *FreeFlow Web Services*
Tax1Percentage	*Tax Percentage* that will be returned to *Web Services*: • When the percentage is 0, the tax name and rate will not be returned to *Web Services* and the tax will not be calculated. • When the percentage is other than 0, the tax name and rate will be returned to *Web Services* and will be calculated into the Print Buyer's price only.
Tax2Name	*Tax Name* that will be returned to *Web Services*
Tax2Percentage	*Tax Percentage* that will be returned to *Web Services*: • When the percentage is 0, the tax name and rate will not be returned to *Web Services* and the tax will not be calculated. • When the percentage is other than 0, the tax name and rate will be returned to *Web Services* and will be calculated into the Print Buyer's price only.
Tax2Amount	Optional field. If this field appears, it will overwrite the *Web Services* calculations, according to the rate. This field is used for setting *Tax2* calculations on top of *Tax1*. *See "Example: Excel File Info, Columns C and D" on page 14*.
Tax3Name	Tax name that will be returned to *Web Services*
Tax3Percentage	*Tax Percentage* that will be returned to *Web Services*: • When the percentage is 0, the tax name and rate will not be returned to *Web Services* and the tax will not be calculated. • When the percentage is other than 0, the tax name and rate will be returned to *Web Services* and will be calculated into the Print Buyer's price only.

Important Note: Any changes made to *Columns C* and *D* in the *Calculation* sheet must be reflected the columns in the *Info* sheet. Otherwise, the *Info* sheet will not be imported to *Web Services*.

Column D

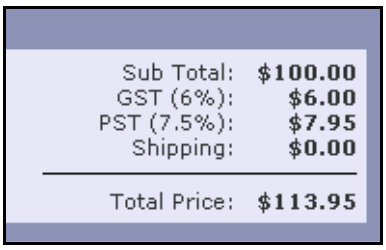
Column D values are inserted by the Print Provider. These values are then imported back to *Web Services*.

Important Note:

- Any changes made to *Columns C* and *D* in the *Calculation* sheet, must be reflected in the appropriate columns of the *Info* sheet. Otherwise, the information cannot be imported to *Web Services*.
- N/A Values - If, for some reason, an *N/A* value appears under one of the fields of *Column D*, the tax that the Print Buyer sees will not be correct. If a Print Buyer receives these types of tax errors, you must download the Excel file which was used to generate the tax calculation, examine the *Column D* values and locate the formula (from the one that the Print Provider set) that gives an *N/A* value.
- It is important to keep the *Tax Excel* file closed at all times during the customer-ordering process. If the file is open and a Print Buyer attempts to place an order, the Print Buyer will not receive a tax rate and a Microsoft Excel message will appear on the server.
- Field Format - Excel provides an option for setting the cell format. This option changes the view but not the value. In the Excel file provided with the system, all cells are set to *General*. To change the cell format, right-click on the cell and choose the appropriate format cell from the menu.
- Changes can be carried out to the other columns (except for *A*, *B* and the minor changes that were defined for *Column C*) of the *Calculation* sheet and new sheets can be added to the file. However, linking two Excel files will cause an error. Instead, any information that exists in a different Excel file must be copied to a new sheet within the *Tax Excel* that is used for the Print Buyer.

Example: Excel File Info, Columns C and D

In the example below, note the following:

- The *Tax1Name* was set as *GST* with a 6 percentage rate. Since there is no *Tax1Amount* option, *Web Services* calculates the 6 percentage from $100; therefore the *GST* tax will be $6.
- The *Tax2Name* was set as *PST*, with a 7.5 percent rate. However, in this case, we have set the *Tax2Amount* to 7.95 (we have set a formula to calculate *Tax2* according to *Amount+Tax1*). Therefore, the amount that the Print Buyer will see under the *PST* tax will be $7.95 (as set in the Excel file).
- The *Tax3Name* was set as HST with a 0 percentage rate. Therefore, this information will not be imported to *Web Services* and consequently, will not be available to the Print Buyer.

Tax1Name	GST
Tax1Percentage	6
Tax2Name	PST
Tax2Percentage	7.5
Tax2Amount	7.95
Tax3Name	HST
Tax3Percentage	0