



Configurator

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Overview

The Configurator is a tool that allows the user to create items that can be configured to customer specifications (i.e. computers, custom t-shirts, furniture, etc.) by selecting the available options (i.e. monitor, hard-drive, color, etc.) when entering an order. Upon order entry, options will be selected and the customer-specified selection will be saved to the relative line item in the form of a string code. The configured items can have items (components) attached to them.

This document shows how to set up and use simple configurations. For more advanced options, please refer to the [Configurator - Advanced documentation](#).

Settings, Security, and Setup

Security

1. Click on the **Actions** Dropdown and select Security Editor.



2. Search Configurator and enable the following Securities:



Configurator - The configuration maintenance screen. This form is used to create and maintain configurations.

- *Can Resume Historical Configurations* - If set to true, users can restore a historical configuration by changing the Status field from Historical to Active or Pending. See section Status and Versioning for more details; defaults to False.
- *Save Configuration As New Version* - If set to true, any changes made on an existing configuration will create a new version of it, preserving the original one. See section Status and Versioning for more details; defaults to False.

Configurator Dynamic Configured Items - A tab in the Configurator form that allows users to add configurable items (components) to the configuration. See section Dynamic Configured Items for more details.

Configurator Manufacturing BOM - A tab in the Configurator form that allows users to set up details related to Manufacturing Bill of Materials.

Note: This requires the Manufacturing module installed in SalesPad. See section Manufacturing for more details.

Configurator Pricing - A tab in the Configurator form that allows users to set up prices for

configurations based on specific set of option selections. See section Pricing for more details.

Configurator Restrictions - A tab in the Configurator form that allows users to set up restrictions that dynamically remove options based on the user's selection and other rules. See section Restrictions for more details.

Configurator Search - A search screen that allows users to find open configurations.

- *Auto Search* - if set to True, the screen will perform a search as soon as the form is loaded; defaults to False.
- *Can Export Grid* - Determines whether or not the user can export the search result to an Excel file; defaults to True.
- *Can Export/Import Configurations* - Determines whether or not the user can import/export configurations; defaults to True.

Sales Line Configurator - Sales Line Item plugin used to add the configured item into a Sales Document.

- *Selected Option Field* - Represents the field that will be used as a display text in the option fields of the plugin; defaults to Name.
- *Show Attribute Price* - Determines whether or not the price will be shown in the plugin; defaults to True.
- *Show Configured Items Pane* - If set to True, it allows users to open the Configured Items pane on the right hand side of the plugin; defaults to True.

Settings

1. Click the Actions Dropdown and select Settings.



2. Search Configurator and select the following Settings.

Can Reuse Custom Configured Items - Applicable only to Manufacturing BOM configurations. If set to True, the Configurator will use Manufacturing BOM and Item Master objects created previously (if any exist for other customers); otherwise Configurator will create new items each time (this requires the "Manufacturing" module to be installed in SalesPad); defaults to True.

Configuration Summary Option Selection Field - ConfigOption field that determines which value from the selection is used for the summary info; defaults to Name.

Configuration Summary Sales Line Item Field - Set the Sales Line Item field where the summary of the configuration will be stored; defaults to Item_Description.

Configurator String Code Delimiter - Delimiter character for the string code. See section String Code for more details; defaults to "-".

Configured Item Number Fields - Semi-colon delimited list of Sales Documents fields that are used to create the Item Number generated by Configurator. For instance, if set to

Customer_Num; Ship_To_Address_Code, the new items created will have the customer number and the ship to address code (followed by a random number) as the item number. If empty, the String Code will be used as the Item Number.

Set Backorder Quantity For Generated Manufacturing BOM Items – Applicable only to Manufacturing BOM configurations. It determines whether or not the newly created items are immediately set to backorder when added to the Sales Document. If set to True, it will allow users to create Manufacturing Orders directly from the document (this requires the Manufacturing module installed in SalesPad); defaults to False.



Screens

The Configurator is composed of two main screens: the Configuration form and the Sales Line Configurator plugin. SalesPad also has a Configuration Search form that allows users to search configurations.

The Configuration form (as well as Configuration Search form) is available under the menu Configurator, or from the ribbon under the Configurator tab.

The Sales Line Configurator plugin can be accessed from any sales document through the sales line **Action** dropdown menu, or directly from the Configuration form with the **Test Configuration** button.

Configuration Form:



Sales Line Configurator Plugin:



Configuration Search Form:



Configurations

A configuration represents an item that can be configured according to customer specifications. It is composed of a set of attributes (i.e. monitor, hard drive) which can each have one or more options (i.e. 15," 17," and 21").

Example 1: COMPUTER

The configuration for COMPUTER will have the following attributes, from which the user can select the relative options:

Monitor: 15", 17", or 21"

- Hard-Drive: 20 GB, 40 GB, 60 GB, or 80 GB
- Processor: 1 GHz or 2 GHz
- Printer: Inkjet and Laserjet

Note: A configuration must be tied to an existing inventory item in Great Plains (in this case

COMPUTER). This is because Customer Service will enter the GP item on order entry, and the system will automatically load the correspondent configuration to be customized by the user. Before creating the configuration in SalesPad, make sure that the item in GP is correctly set up to be used in an order. In particular, the item must have:

- A Default Selling Unit of Measure in Item Price List Maintenance
- At least one Price List for each unit of measure, with Price Method of “% of List Price,” and with “100%” on each Price List
- A Default Site ID in Item Quantities Maintenance


Steps to create the COMPUTER configuration:



1. Open the Configuration screen and type the item number (in this case COMPUTER) in the Item Number field, or click the ellipsis to load the Inventory Lookup screen and search for an item
2. Add the configuration name, description, and string code (if not pulled automatically from the item number)
Note: String Code is not required at this level, but it is highly suggested in order to uniquely distinguish the configured items created in a Sales Document. See section String Code for more details.
3. Choose the Configuration Type from the available options. Each option has a different purpose:
 1. Assembly BOM - The item added to the document will be an assembly bill of materials
 2. Manufacturing BOM - The item added to the document will be a manufacturing bill of materials. See [Configurator - Manufacturing documentation](#) for more details.
 3. Kit - The item added to the document will be a GP kit.
 4. Package - The item added to the document will be a SalesPad package. See [the Configurator Kits and Packages documentation](#) for more details on the Kit and Package types.
4. For this example, leave the Price field to 0.
5. Set the status to Active.
6. Begin Date and End Date fields represent the date range in which the configuration is valid and can be added to a sales document. If the configuration has no expiration date, just leave the End Date blank.
7. Click **Save**. A tool tip message will show that the configuration has been saved with a new version (in this case one). See [Configurator - Advanced documentation](#), specifically section Status and Versioning for more details about versioning.
8. In the bottom part of the screen, select the Details tab and click **New**. This will add an empty row for the first attribute.
9. Type Monitor in the field Name, and then proceed with another attribute (for the


moment leave everything else blank or with the default values).

10. You should end up with something like this:


 Notice that for the last attribute (Printer), the Required field is unchecked. This means that this attribute is optional, and the customer does not have to select a printer (whereas everything else is required to configure this computer).

11. The attributes will be shown in the plugin in the exact order as they appear in this grid view. Use the **Move Up** and **Move Down** buttons to change the sequence of attributes.

12. Now that all the attributes are set up, you can move to the options page. Select the first attribute and click on the little arrow in the left corner of the screen (under the caption Options).


 You can also move from one page to another by double-clicking anywhere on the attributes grid view. This will open the second page, from which you can add the options for the selected attribute. You can see which attribute you are in by looking at the top part of the page, in the Attribute grid.

13. Click **New** to add the first option, and fill in the row with the following values:

 **Note:** The field Name is mandatory, and it cannot be left empty. When the configuration is saved, all the options that do not have a value for Name will be automatically removed.

Note: The field String Code is also mandatory. The system will automatically set the value from Name in case the user leaves this field empty. See section String Code for more details.


14. In this particular configuration, we will associate a GP item for each option. This way, the final configuration will have a list of components based on the options selected by the user.


1. Users can open up the Inventory Lookup by clicking the ellipsis (...) button in the Item Number field. To clear out the cell use the  button next to the ellipsis (...) button.


The Item Number is validated whether you use the Inventory Lookup or you simply type in the item number. The system will automatically pull the Item Description, UOfM, and Price from GP unless these fields already have values. See [Configurator – Advanced documentation](#), specifically the Pricing section for more advanced pricing options.

15. Add the rest of the items as seen in the above image.

16. Configurator allows you to attach a picture for each option. The field Picture features three buttons:

1. Dropdown () – Allows you to see the picture (if any).

2. Ellipsis () – Allows you to browse your computer to load a picture.

3. Delete () – Allows you to remove a picture (if any).

17. To add a picture to the first option (15" monitor) click the ellipsis, use the file browser to locate the picture in your computer, and click **Open** to add the picture

Notice that the icon now has colors; this denotes that the option has a picture (otherwise the icon would be gray):

 Click the dropdown to see the actual picture:



18. Add the rest of the pictures so that the attribute Monitor is complete.
19. To move to the next attribute, simply click the navigation button at the top right corner. Alternatively, you would need to go back to the Attributes page, select the second line, and move back to the options page.



20. Add the options for Hard-Drive like you did for Monitor. You should end up with a screen like this:



21. Do the same thing with Memory and Printer.



22. Click **Save**. The configuration is now done and ready to be tested (see section Sales Line Configurator for instructions on how to test a configuration).

Note: Attributes and options can be imported from an Excel file. See [Configurator – Advanced documentation](#), specifically section Excel Import for more details.

Example 2: “CHAIR”


The configuration for CHAIR will have the following attributes, from which the user can select the relative options:

- Width: from 18” to 24” (1/8” increment)
 - Back Height: from 12” to 16” (1” increment)
 - Legs Height: 16”, 17”, or 18”
 - Style: Classic or Modern
 - Color: Wood, Black, or White
 - Gloss paint: included or not included
- Steps to create the CHAIR configuration:

1. Open the Configuration screen and type the item number (in this case CHAIR) in the Item Number field

Note: Like with COMPUTER, CHAIR must be properly configured in Great Plains

2. Fill in the header like this:

 Notice that this time we have \$350.00 for price: this is the base price, on top of which we will add prices for some of the options.




3. On the Details tab, click **New** to add the first attribute, Width. For this attribute we will use Text Box for Control Type.

See section Control Types for more details about all the controls available in Configurator.

4. Since Text Box allows users to free-type in it, we want to make sure that they will input only numerical values within a certain range (otherwise they could erroneously enter invalid dimensions or even non-numerical values).

1. We can achieve this by specifying Value Min, Value Max, and Value Increment.

This way we will not need to specify Options like we would with a dropdown.

2. In our example, we want the width of the chair to be between 18" and 24" (inclusive), with an increment of 1/8" (this prevents the user from adding numbers such as 18.9954," which would be an invalid measure).
5. Add the second attribute (Back Height) as Text Box, with values as shown above.
6. The next items (Legs Height, Style, and Color) will all have a dropdown for Control Type.
7. As for the Gloss Paint attribute, this one will be a Check Box, since there are no real options to pick from, just an included or not included state.
 1. Make sure you set the String Code for Gloss Paint. The field is mandatory for Control Type of Check Box, and the system will automatically copy the value from Name into String Code in case the latter field is left blank.
Notice that Gloss Paint has a price of \$36.00. This means that if this option is checked, \$36.00 will be added to the final price of the configured item.
8. Now we can add the options to the attributes.
 1. Select the attribute Legs Height, move to the Options page, and add the following values:

9. Add the options for Style and Color like below:
  Notice the options have pricing in them. If the Style is Classic, the chair will have a base price of \$100.00, whereas if it is Modern, it will be \$150.00. Color also plays a role in the final price of the item, and its price will be added to the Style price. For instance, a Black and Modern chair will be \$175.00 (\$150.00 + \$25.00), whereas a Maple and Classic chair will be \$140.00 (\$100.00 + \$40.00).
10. Click **Save**. The configuration is now done and ready to be tested (see section Sales Line Configurator for instructions on how to test a configuration).

Control Types

Configurator provides five different type of controls for the attributes. Each type is suitable for different purposes:

- Text Box: free-type field
- Dropdown Single: single (predefined) option
- Dropdown Multiple: multiple (predefined) options
- Check Box: included/not included state
- Configuration: nested configuration

Text Box

The Text Box is a free-type field. The user can enter any text in it.



Unlike dropdowns (which automatically force the user to pick a value from a predefined list), text boxes allow users to freely type the option. This gives more flexibility because it allows an infinite number of entries. For instance, the field could be the custom engraving

text of a particular item. Since the customer can request any text or phrase, it would be impossible to use a dropdown with predefined strings. In this case, a text box would be the perfect choice.

Numeric Values

Text Box can be set to accept numeric values only. In order to do that, you will simply define a range of values using the Value Min, Value Max, and Value Increment.



The Value Increment field allows you to define the precision of the entry. In this example, Width can be specified to have increments of 1/8." This will prevent users from entering invalid numbers such as 18.9954." To force the users to enter a number with two decimal places, you would simply put 0.01 in the Value Increment field.

Text Box with Options

The Text Box control allows you to have options like you do with dropdowns. These options will not be visible on a menu like the dropdown controls; rather they are used to incorporate a range of values that define a specific String Code or Item Number. For instance, we can add two options for the Width that bring back the String Code, LT if the width is less than 20" and GT if it is greater than or equal to 20".



Note: The field Option Value serves the same purpose as Option Min and Option Max; however, instead of defining a range, with Option Value you would specify the exact value.

With the setup defined above, we combined a range of values that brings back a specific String Code (in the same way we could have specified an item number).



DropDown Single

The DropDown Single control allows you to define a set of choices from which the end user can select the desired option.



This control still allows the user to freely type in the field; the options available, though, are defined upfront and shown on a list, and invalid entries will not be accepted. The DropDown Single allows you to see pictures for each option.

DropDown Multiple

Like DropDown Single, DropDown Multiple shows a predefined list of options; the difference with the previous control is that DropDown Multiple allows one or more selections.



The selected options will be displayed on the field separated by commas.

Check Box

The Check Box control is used when the option is simply a Yes/No or Included/Not Included

type of selection.



Unlike all the previous control types, Check Box is not designed to include options.

Configuration

This control type allows users to nest configurations within another one. For instance, the configuration CHAIR can be added in the configuration COMPUTER as an additional attribute:




Sales Line Configurator Plugin

Plugin Sales Line Configuration is the tool used by Customer Service on order entry. It shows all the attributes and options defined by the administrator who created the configuration, and it allows users to build (or configure) the item according to the customer's needs.

Testing within Configurator

The Configuration form features a functionality that allows you to test your configuration without the necessity of creating an actual order. Steps:

1. Open the configuration COMPUTER and click the **Test Configuration** button.
 - The Sales Line Configurator plugin will pop up as if it was in a sales order, except that it is in Test Mode and the buttons **Add** and **Add & Close** are disabled. On the left hand side you can see the attributes you set up in the configuration screen. Next to each attribute there is an icon that shows the validation state of the field:
 - The user must make a selection before the item can be added to the document.
 - This is an optional attribute and the field can be left blank.
 - The user made a selection and the selection is valid.
 - The input is not valid (the specifics of the error will be shown in a tool tip message).
2. To make a selection, click the dropdown and choose an option from the list.
 - To clear out a selection you can either delete the text directly from the field, or click the button.
3. Click **OK** (or hit Enter) to close the dropdown. Notice that the string returned to the text field (17") comes from the Name field. This can be customized by selecting another field in the Security setting *Sales Line Configurator > Selected Option Field*.
4. Instead of using the dropdown, you can simply type in the field to make a selection. For instance, you can type 6 and tab off to select the option 60 GB.
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5. As soon as you select all the required options, the configuration is complete.
 1. The green checkmark at the bottom will denote this state.
 2. The unit price is also displayed once the configuration is complete.

 Notice that the Printer attribute is optional; therefore, the user is not required to select a printer. The plugin will show all the pictures related to the options selected by the user. If you hover over the picture, two little arrows will appear, allowing you to scroll through all the images that are available according to the selection.



Configured Items (Components)

The main concept of configurations is that the item (CHAIR, COMPUTER, etc.), once configured in a sales order, will have a list of “configured items.” These items can be components of a package or bill of materials. These components are Great Plains inventory items, and they are defined upon creating the configuration.

The list of configured items is available in the Sales Line Configurator plugin in the Configured Items panel. This panel is hidden by default, but it can be made visible by clicking the little triangle on the right side of the form.

Note: This requires the Security setting *Configurator > Show Configured Items Pane*