Print Module

User Manual

RIP SOFTWARE - VERSION 11 - CALDERA 2017

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License Agreement

Introduction

In this document, you will get the description of the Caldera RIP Print module. The module can be a little bit different depending on:

- the printer model (especially for the printer settings and special inks)
- the options included in your Caldera RIP package

The following elements are Caldera RIP options. Their use may require the purchase of a specific key, depending on your RIP package.

- ContourNesting
- Tex&Repeat
- Nest as block
- Trim-O-Matik
- VisualCut
- GrandCut
- InkPerformer

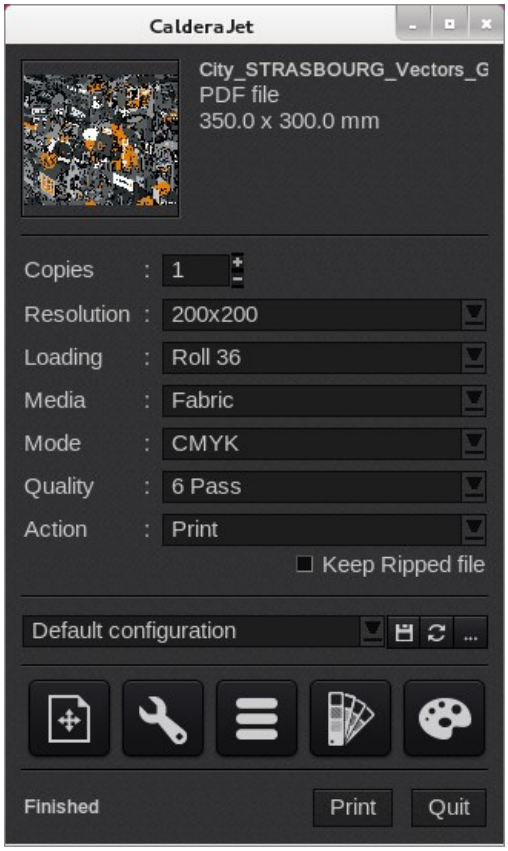
HowTo Open the Print Module

To open the **Print** module (3), you have several solution, you can:

- Drag the image from the **ImageBar** (2) and drop it onto the **Print** module icon (1) in the **ApplicationBar** or
- Drag the **Print** module icon (1) from the **ApplicationBar** and drop it onto the image in the **ImageBar** (2) or
- Double-clicking on the **Print** module icon (1) in the **ApplicationBar**, and then drag the image from the **ImageBar** (2) and drop it on the opened **Print** module (3).

Once the **Print** module (3) is open, you can change the image at any time by dragging a new image from the **ImageBar** into it.

Main Window

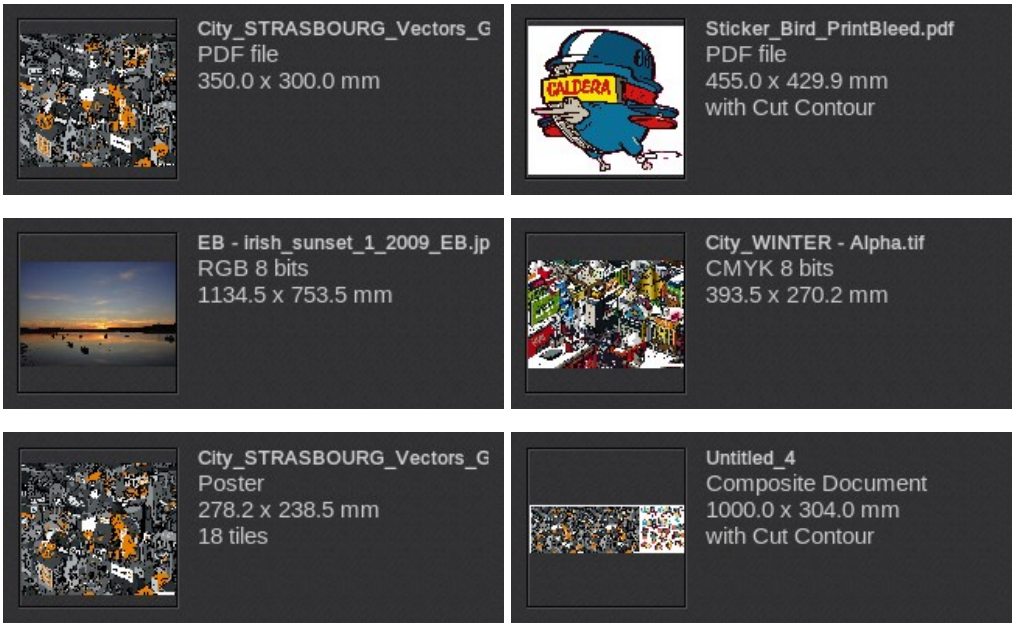


File Info

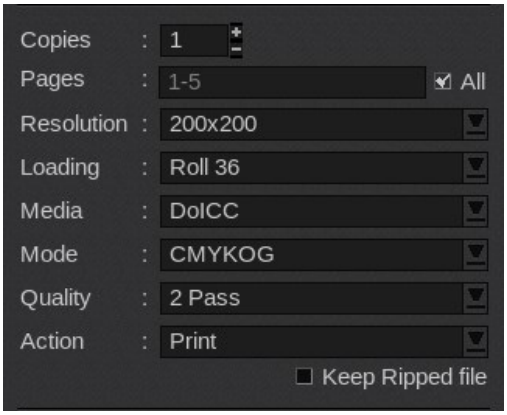
When you drop the Image into the **Print** module, you can see its thumbnail on the top of the Window.
Few data are displayed here:

- **Name**: displays the image's complete name
- **Type**: displays information about the image build: *PDF file*, *RGB 8 bits*, *CMYK 8 bits*, *Poster* (global Poster made by **Tiling+**) or *Composite Document* (tiles made by **Tiling+** or documents made by **Compose**)
- **Dimensions**: displays the file original size
- **With Cut Contour**: indicates if the files contains Cut Contours.

Examples of File Info



Print Settings



The Main Window allows you to define the following print settings:

- **Copies**: the number of copies you wish to print
- **Pages**: allows you to choose the page(s) to print for multi-page documents
- **Resolution**: the print resolution available in the profile selected
- **Loading**: the page format / roll width. Pages formats are managed in the .
- **Media**: the profiles available for the material
- **Mode**: the available modes in the profile selected
- **Quality**: the available print quality options in the profile selected

Resolution, **Media**, **Mode** and **Quality** options are dependent on the profiles loaded into **Caldera RIP**. Available options are shown in gray. Unavailable options are shown in red. Purple is used for compatible print modes and blue is when only the linearization is available. When you select an unavailable option, a warning will be appear when you hit the ***Print*** button.

- **Action**: Available options are:
  - **Print**: rips and prints the file simultaneously
  - **RIP**: rips the file and holds it in the **Spooler**
  - **RIP then Print**: rips the entire file and then sends the file to print
  - **Nest**: nests all images sent to the printer and holds them in the **Spooler**
  - **Keep Ripped file**: for **Print** and **Rip then Print** actions. When this box is checked, the sent file remains in the **Spooler** so you can reprint the job.

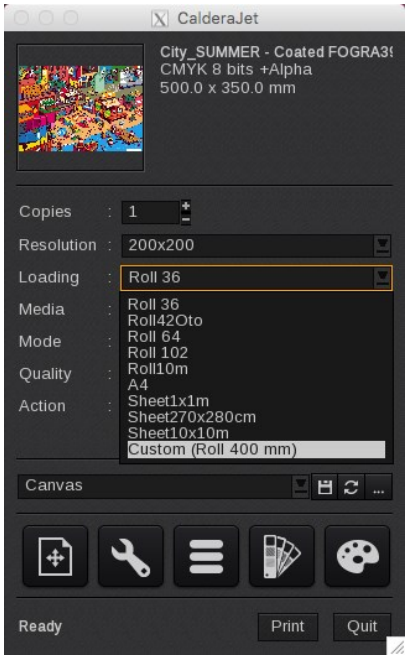
CustomLoading

CustomLoading allows you, without creating a new page format in the module, to use a Custom page format for your print. This temporary loading is set easily in the *Page Setup* window.

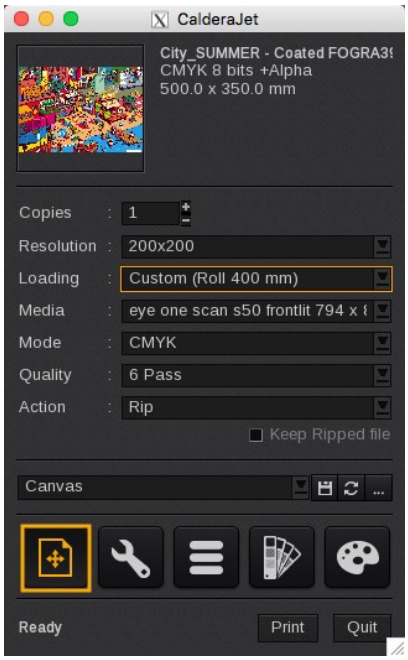
You can save the **CustomLoading** values into the presets (print configurations) so it can be saved for future use and it can be used for automation with **QuickPrint** for example.

Follow these quick steps to use **CustomLoading**:

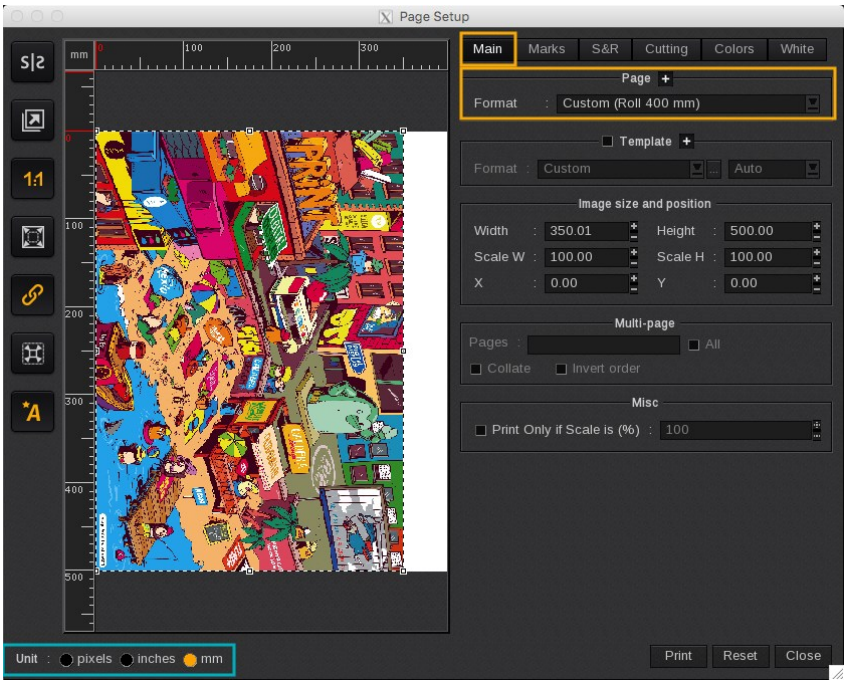
1. On the **Print** module main interface, select *Custom (...)* as **Loading**.



2. Then click on the first button to open the *Page Setup* window.

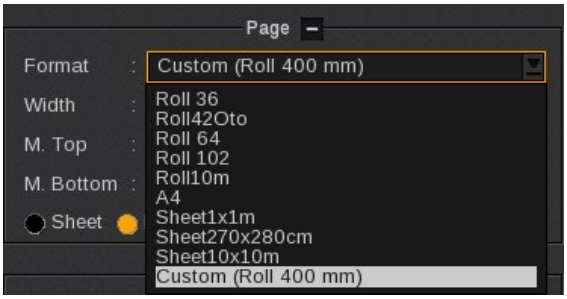


3. On the Main tab, display the **Page** settings by clicking on the ***(+)*** button.



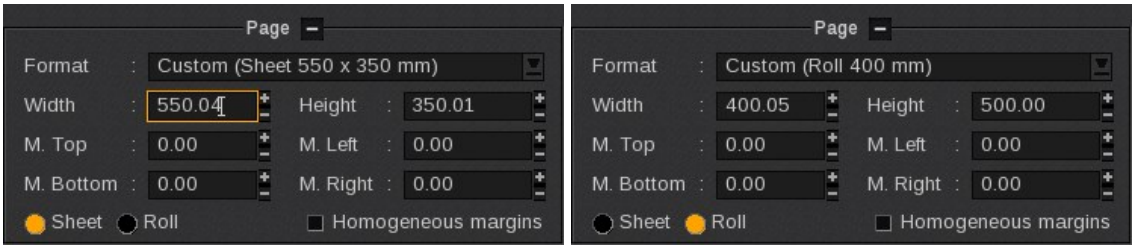
Note: do not forget to use the Unit selection on the bottom left of the window (blue rectangle) to change the unit used to set the dimensions (choice is between pixels, inches and millimeters (mm)).

4. Under the **Format** field, you can see the *Custom (...)* as you have selected it on step 1. It is a duplicate of the **Loading** field.



5. Then choose the type of the loading between **Sheet** and **Roll**.
6. Finally, enter the dimensions: **Width** and **Height** (for Sheets) and the **Margins** (**Top**, **Bottom**, **Left** and **Right**). Use Homogeneous margins to automatically set all margins to the same value.

The dimensions are displayed in the format name inside the parenthesis as shown below for a sheet and a roll format.



7. Then you can continue to set your print.

AutoLoading

AutoLoading asks the printer for its **Loading** format. It is then automatically selected in the list, using the **CustomLoading** feature if there is no exact match in the list.

Is my printer compatible with AutoLoading?

This feature is not available for every printer as all printers do not have this information and / or the ability to give it back to the Caldera RIP.

Please note that file printers generally don't support this feature.

To know if your printer has the **AutoLoading** feature is easy. On the **Print** module main interface, check the **Loading** field. If a refresh button is visible in the menu, that means that the feature is available.

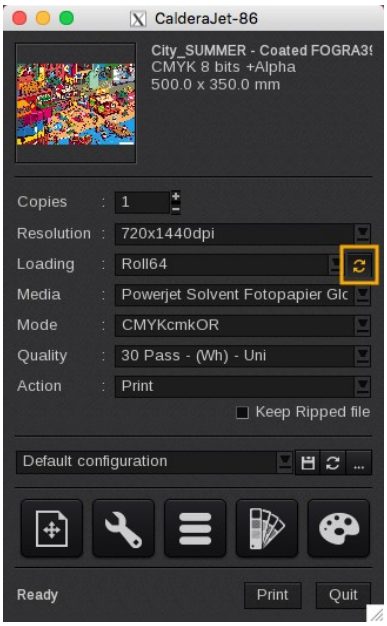
AutoLoading is available for this printer.

AutoLoading is not available for this printer.

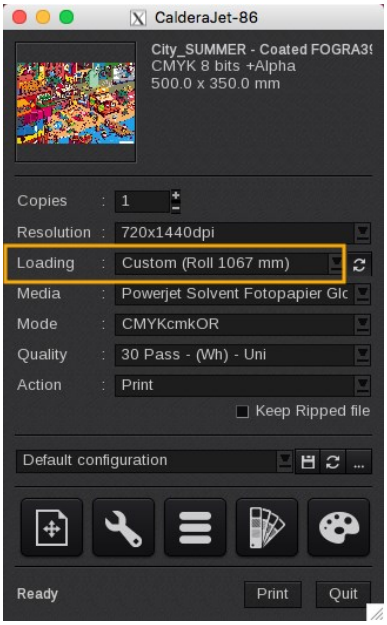
HowTo use AutoLoading?

Follow these quick steps to use **AutoLoading**:

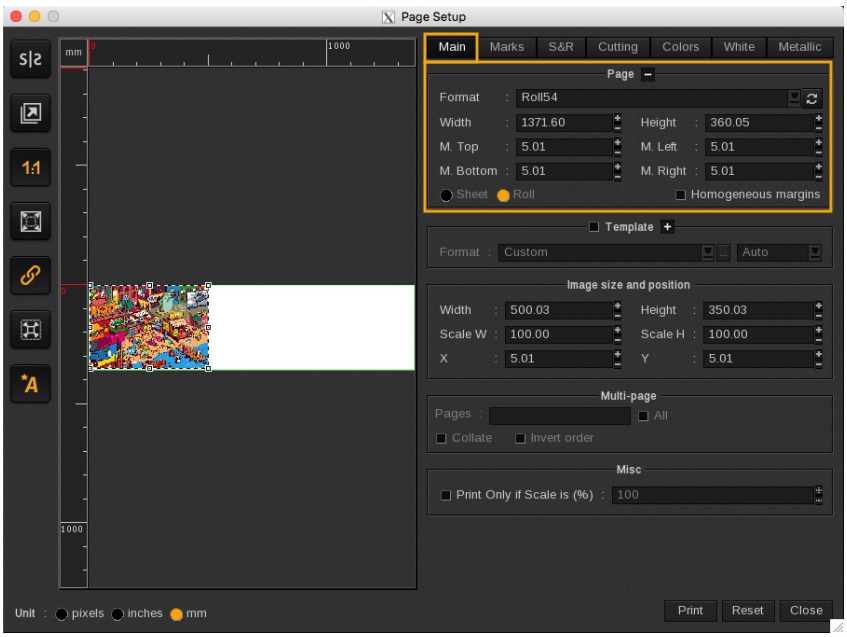
1. On the **Print** module main interface, on the **Loading** field, click on the refresh button.



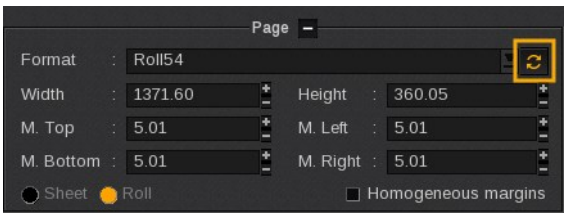
2. The Custom format is automatically selected with the proper size.



3. You can also use the AutoLoading feature on the *Page Setup* window. Go to the Main tab, display the **Page** settings by clicking on the ***(+)*** button.

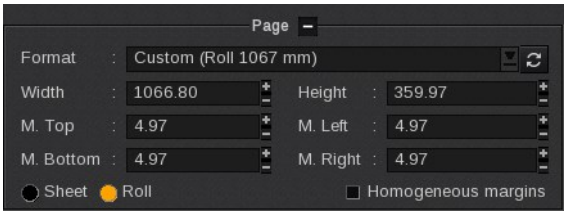


4. Next to the **Format** field, click on the refresh button.



5. You can see that the **Format** is changed for the *Custom* one and that all the dimensions and margins are automatically changed.

Like for CustomLoading, the dimensions are displayed in the format name inside the parenthesis.



6. Then you can continue to set your print.

AutoMedia

AutoMedia asks the printer for its **Media** type. It is then automatically selected in the list.

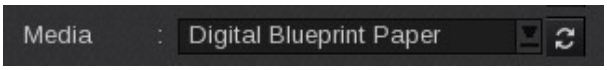
Take note: For multi-rolls printers, AutoMedia selects only the first active media or first loaded media.

Take note: if the media loaded has a generic media type and if other media are also linked to this generic type, when performing AutoMedia, Caldera RIP will select the first media in the list linked to this media type even if another one suits better later in the list.

Is my printer compatible with AutoMedia?

This feature is not available for every printer as all printers do not have this information and / or the ability to give it back to the Caldera RIP.

To know if your printer has the **AutoMedia** feature is easy. On the **Print** module main interface, check out the **Media** field. If you see a refresh button on the line, this means that the feature is available.



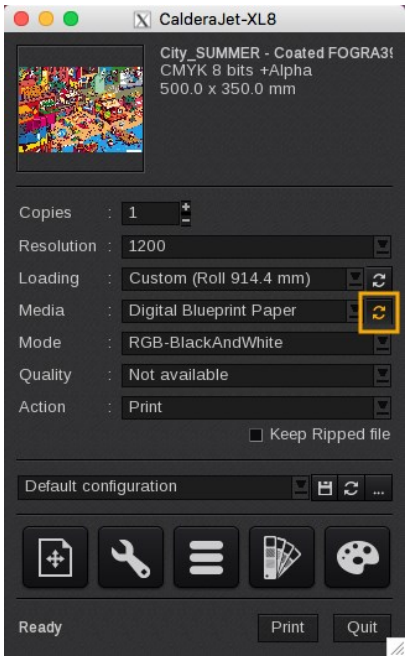
AutoMedia is available for this printer.

AutoMedia is not available for this printer.

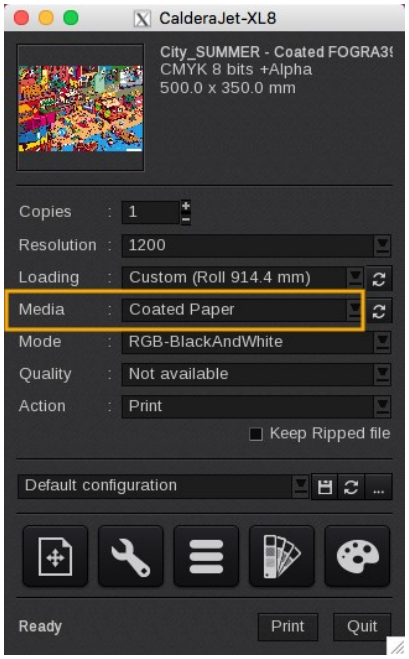
HowTo use AutoMedia?

Follow these quick steps to use **AutoMedia**:

1. On the **Print** module main interface, on the **Media** field, click on the refresh button.



2. The correct media is automatically selected in the list.

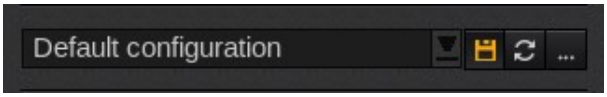


3. Then you can continue to set your print.

Print Setting Configurations

To streamline your workflow you can save your print settings in the **Print** module and quickly access them for future print jobs.
When you select a previously saved print setting, the selections for print parameters (resolution, media, mode...), page setup parameters (including crop marks and cut parameters and job adjustment) and color management (rendering output and input, simulation profile, **InkPerformer** settings...), will automatically populate so you do not have to select the settings manually.
In the **Print** Module you have the following options:

- ***Save***: Saves print setting configurations
- ***Refresh***: Refreshes a saved print setting back to its original state
- ***Open***: Opens the print settings configuration window



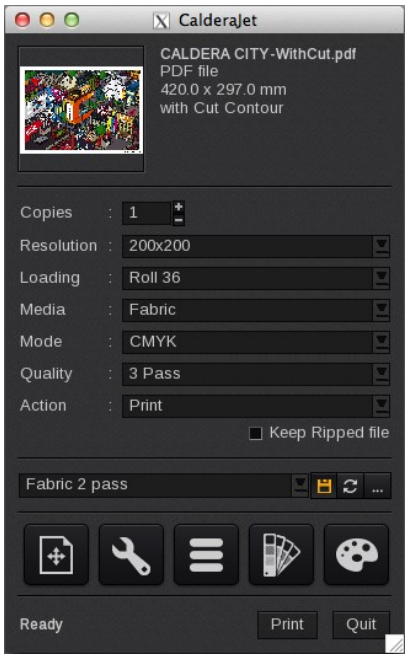
Save Print Setting Configuration

To save a print setting configuration:

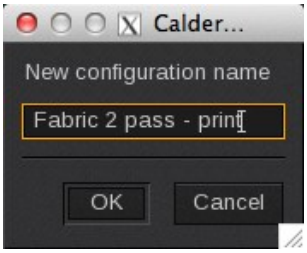
1. Define your print settings.

   You can use any graphic to launch the **Print** module, the image is not saved in the print settings.

2. Then click the ***Save*** button: 

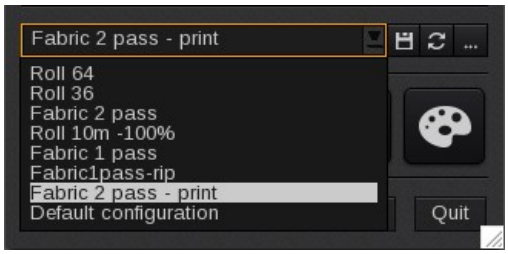


3. Name the saved print settings and click ***OK***.



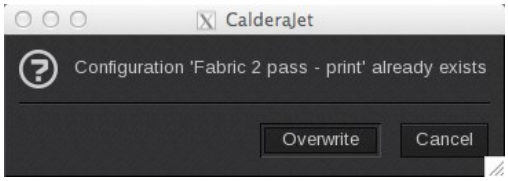
Best practice is to save print settings using a product name or a short summary of the parameters. Note the name of the saved print settings in the screenshot above.

4. You will see your saved print settings in the drop-down list.



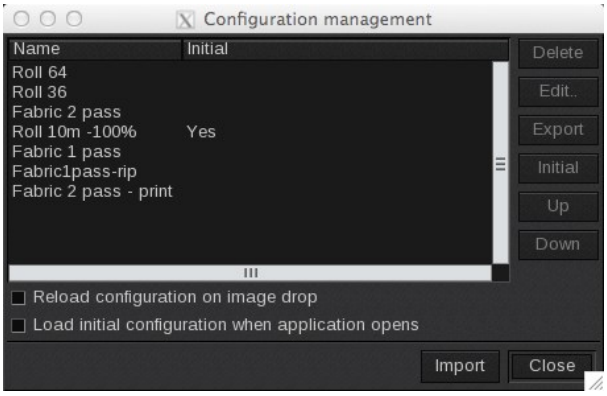
Edit

To edit a saved print setting, select the saved print setting from the drop-down list. Make your changes and then click ***Save***. Do not change the name of the print setting.
Click ***Overwrite*** to confirm your changes.



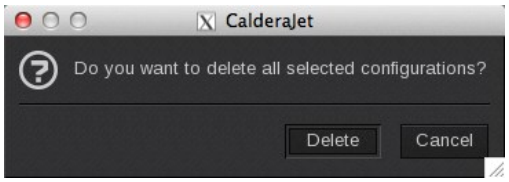
Open the Configuration Management Window

You can open the *Configuration management* window to access your list of saved print settings by clicking the ellipsis button  .

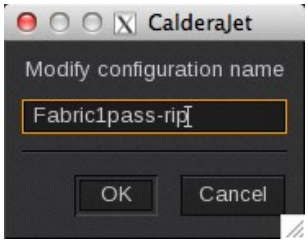


The *Configuration management* window allows you to perform the following actions.

- **Delete**: deletes the selected print setting configuration(s). Confirm the action



- **Edit**: edits the selected print setting configuration's name



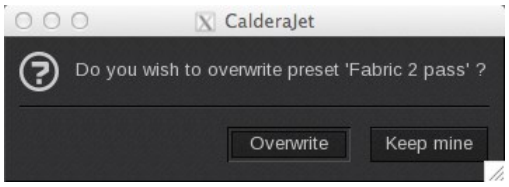
- **Export**: exports and saves the selected print setting configurations as an .xml file to the workstation

- **Initial**: assigns the selected print setting as the default. Designated by a "Yes" next to its name.
- **Up**: moves the selected print setting up in the order of the drop-down list
- **Down**: moves the selected print setting down in the order the drop-down list
- **Reload configuration on image drop**: refreshes your print settings to its original saved settings upon each new print job in case a setting was changed for the previous print job

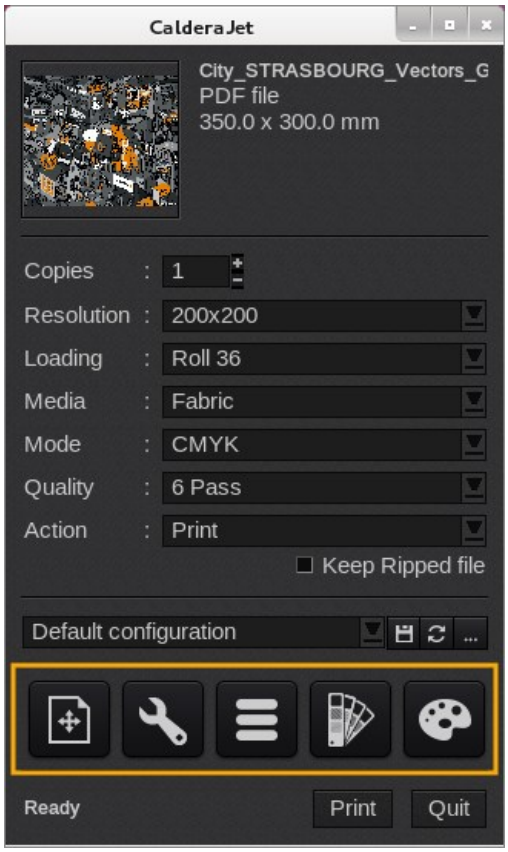
You can also, at any time, refresh the parameters and reapply the current configuration by clicking on the refresh button on the **Print** module window: 

- **Load initial configuration when application opens**: enables the default print setting to appear for new print jobs. When disabled the last used print setting will populate for a new print job.
- **Import**: imports a saved print setting from another workstation

Be careful, if you try to import a configuration that is named as one you already have. You will be asked to choose either to ***overwrite*** or to ***keep your configuration***.



The Icons



The Printer Module window displays the following icons:

 **Page Setup**: opens a window where you can change the scale and position of the image, add crop marks, manage cut-lines, and more.

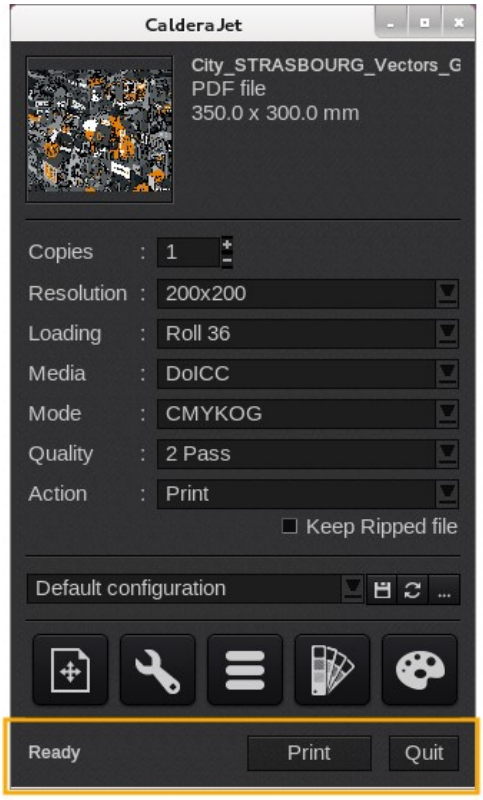
 **Printer Settings**: opens a window with options available for your connected printer such as rewind after print and more.

 **Spooler**: opens the *Spooler* window where you can see the progress of your print jobs

 **Spot Color**: opens the *Spot Color management* window where you can view the spot colors in your image and / or you can also replace them to match the original pantone or customer colors.

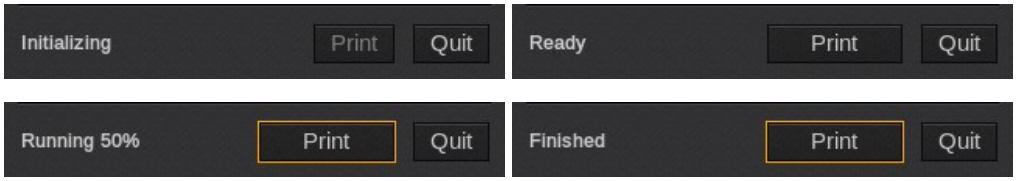
 **Colors**: opens the *Colors* window where you can made changes to your color management

Actions

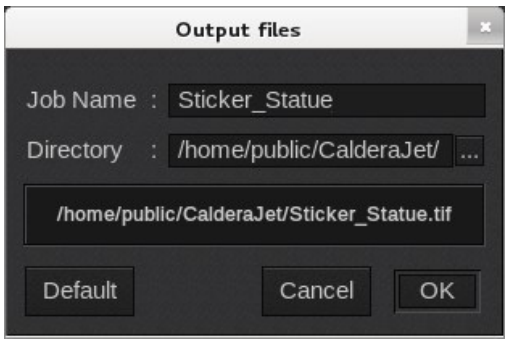


In this area, you can find:

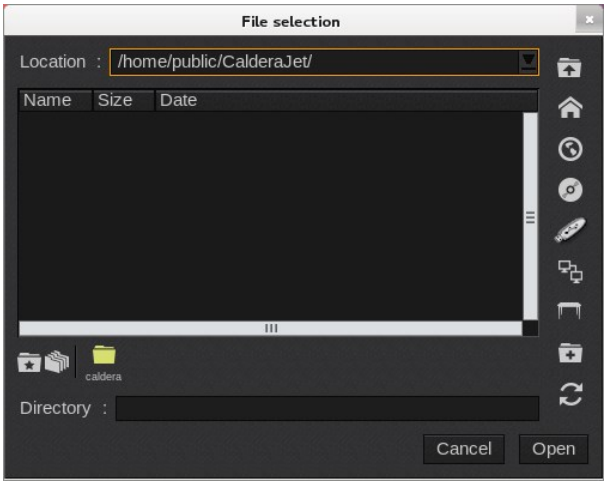
- **Status**: displays the printer status. It can either be: *Initialing*, *Ready*, *Coming* (when a file is sent to the printer), *Running %* (when a file is being proceed by the printer) and *Finished*



- ***Print***: launches the selected **Action**. When the printer is driven using Files, the following window opens. It let you set:

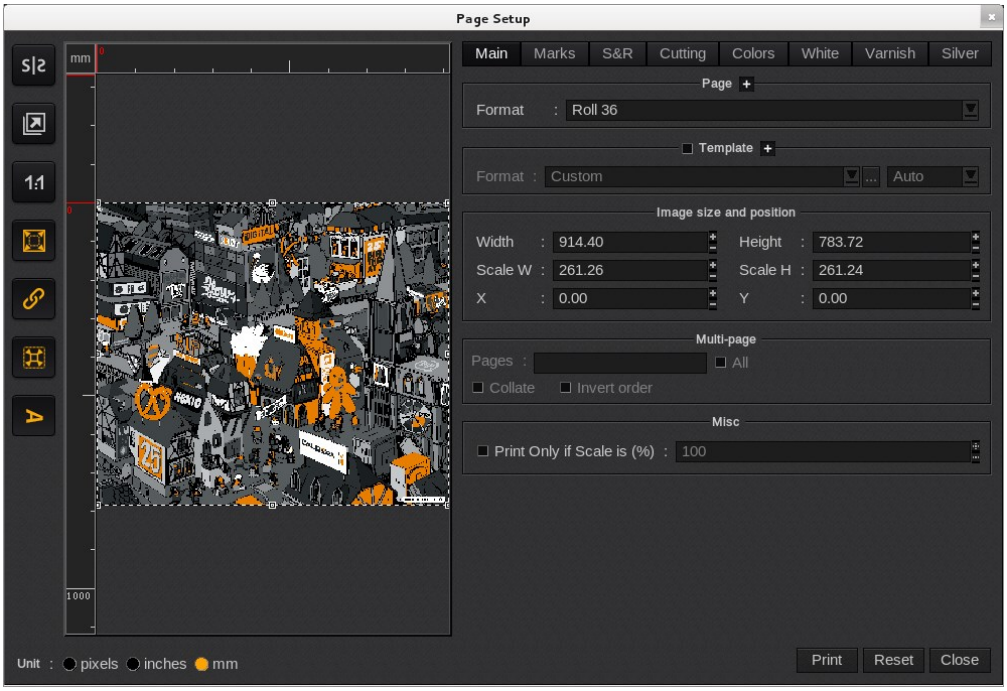


  - **Job Name**: changes the name of the output file
  - **Directory**: selects the directory where the output file will be create. Use the ***[...]*** button to open the *File selection* window and browse to your wanted location.



  - Overview: the full path, job name and extension are written down here.
  - ***Default***: erases your changes and puts the default settings back. These elements are set in the module.
  - ***Cancel***: cancels the action and closes the window.
  - ***OK***: closes the window and proceed the action.
- ***Quit***: Closes the **Print** module. If selected when files are still being printed or ripped, the action will continue in the background and you can view the progress in the **Spooler**.

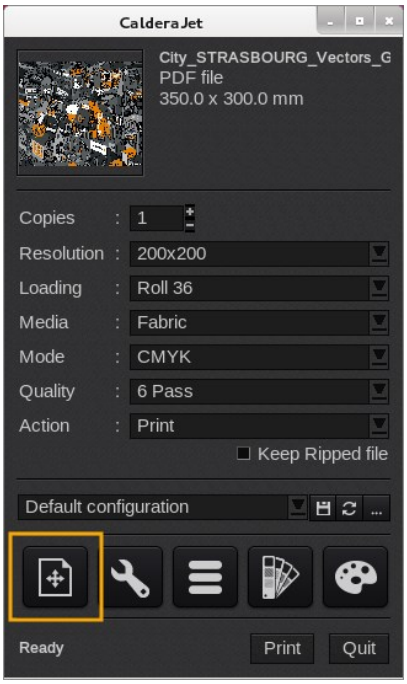
Page Setup



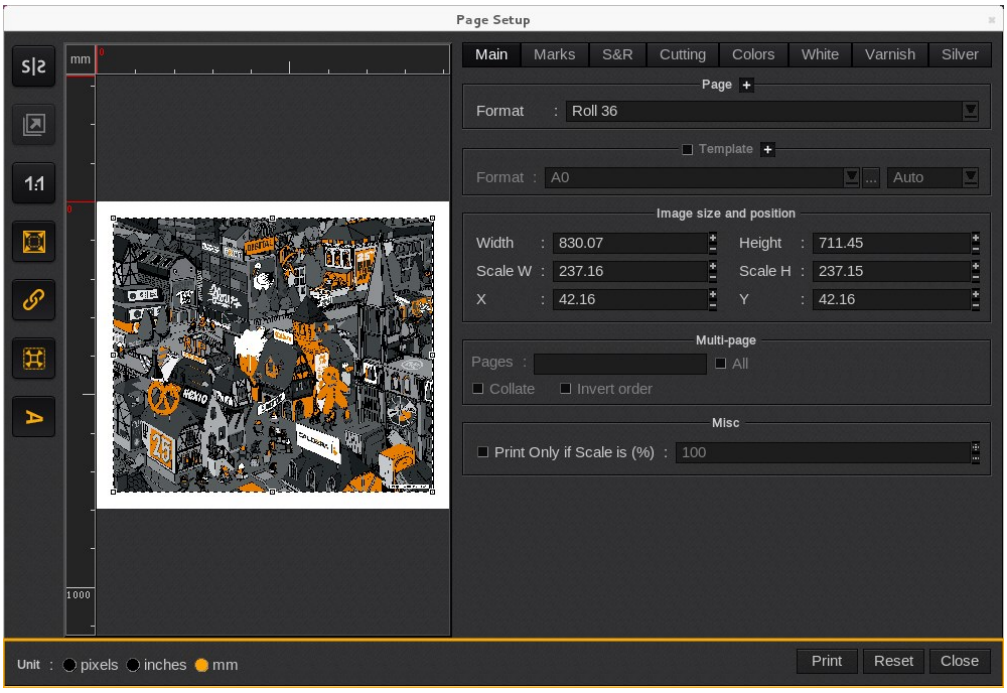
The *Page Setup* window is up to eight areas: **Actions**, **Preview**, **Main**, **Marks**, **S&R**, **Cutting**, **Colors** and **Special Inks** (if applicable).

Open the Page Setup window

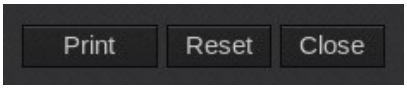
Click on the first icon button of the **Print** module main window.



Actions



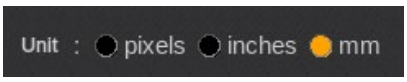
You can perform the following actions in the, Main tab in the *Page Setup* window:



- ***Print***: launches the action assigned in the *Main* window such as *RIP then Print*. If your image is a Poster (created in **Tiling+**), you can here enter the tile to be displayed and printed and the button changes into ***Print Tile***. In this window, you can print tile by tile whereas, in the main **Print** window, you can print all the tiles at the same time.

- ***Reset***: resets the image to its original size and position
- ***Close***: closes the *Page Setup* window

Additionally you can indicate in which **Unit** of measurement you want to view your image.



- **pixels**: displays image information in pixels
- **inches**: displays image information in inches
- **mm**: displays image information in millimeters

Preview

The **Preview** area is located on the left side of the **Page Setup** window. This is where you see your image placed on the media. The printable area is shown in white and the margins are displayed in green. You can modify your image size in **Preview** by dragging the corners of the image. You can also move the image on the media by dragging it from one side of the printable area to the other. The **Preview** is dynamic and will automatically display any new elements added such as crop marks, annotations, etc.

Under normal circumstances **Preview** will show all copies being printed when using **Step&Repeat**. Further explanation is included under the S&R tab.

Icons

There are seven icons located on the left that allow you to apply specific parameters to your image:

Horizontal Symmetry: mirrors the image horizontally.

Out: places the image out of the printable area. The image parts placed out of the printable area will not be printed.

Original Size: resizes image to original size (scale 1:1).

Full Page: resizes image to full page size of the media.

Original Proportions: keeps the image to its original proportions when activated.

Centers: centers the image in the middle of the page or in the middle of the roll width.

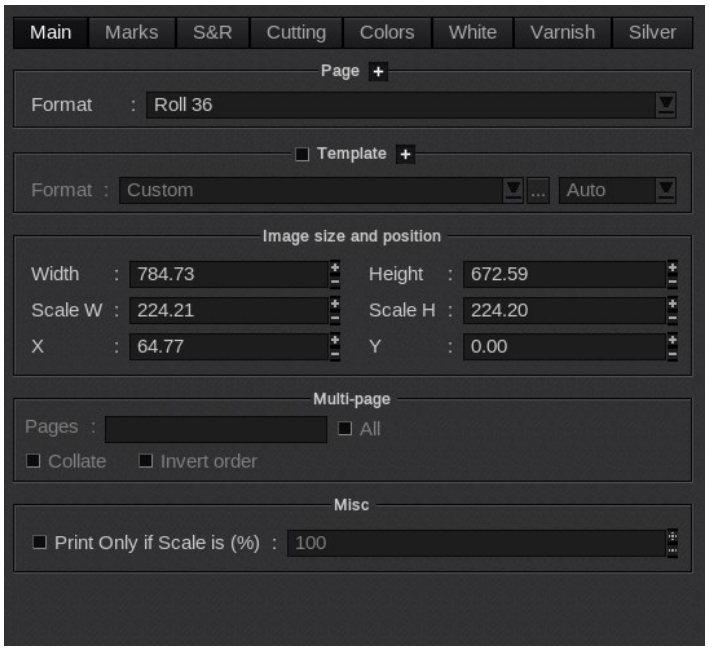
Image Rotation: rotates image based on the following selections

- **Automatic Orientation**: rotates image to minimize media waste.
- **Portrait**: rotates image to portrait orientation.
- **Landscape**: rotates image to landscape orientation.
- **Original**: rotates image to its original orientation.
- **90° Right**: rotates image 90° right.
- **180°**: rotates image 180° .
- **90° Left**: rotates image 90° left.

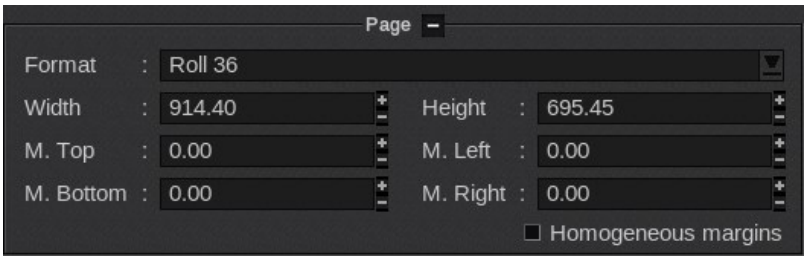
Main

The Main tab is the first tab listed on the *Page Setup* window. The Main tab is divided into five areas: **Page, Template, Image size and position, Multi-page** and **Misc.**

Note: Click on (**+**) to expand a section and display all its available settings.



Page



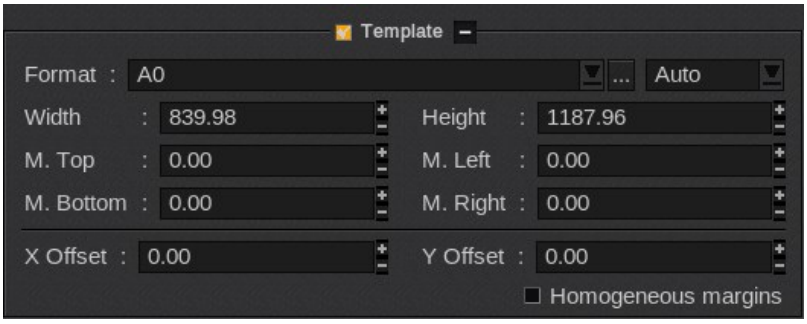
The **Page** area displays media page setup and printable area information.

- **Format**: lists media printer feeding selection. This is the same field as the **Loading** field located in the **Print** module's *Main Window*. If you change the format selection in either field, it will automatically change the other one.

  Please refer to the **EasySelect** section for the use of the Custom format (CustomLoading) and AutoLoading.

- **Width** and **Height**: displays the roll or sheet dimensions, including the margins. By default, it uses the value defined in the Printer Configuration set in the module. In roll mode, the height is not taken into account.
- **M. Top**, **M. Bottom**, **M. Left** and **M. Right**: lists the margins' dimensions. The margins are displayed in green in the **Preview**.
- **Homogeneous margins**: applies the same margin dimensions to each side of the page.

Template



The **Template** area allows you to define a printing template. A template is different from the page format because it is a defined area within the page format.

- **Format**: lists available template formats (A4, A0, LetterUS...) or create one using the ... button. You can also define the orientation of the format, either **Landscape**, **Portrait** or **Auto**.
- **Width** and **Height**: displays the template's dimensions, including the margins.
- **M. Top**, **M. Bottom**, **M. Left** and **M. Right**: displays the template's margins' dimensions.
- **X Offset** and **Y Offset**: displays the template's location on the media.
- **Homogeneous margins**: applies the same margins dimensions to each side of the template.

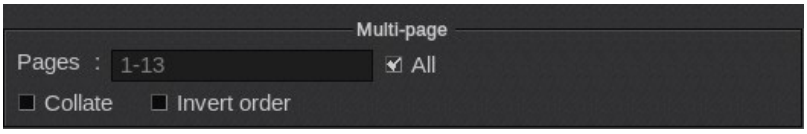
Image size and position

The **Image size and position** area displays the dimensions of the image located in the preview.

- **Width** and **Height**: displays the image's dimensions for width and height.
- **Scale W** and **Scale H**: displays the image's dimensions for width and height to scale.
- **X** and **Y**: displays the image's location on the horizontal and vertical axes.

Note: When the original proportions button is selected and a field is changed, the corresponding field will automatically update to keep its original proportions.

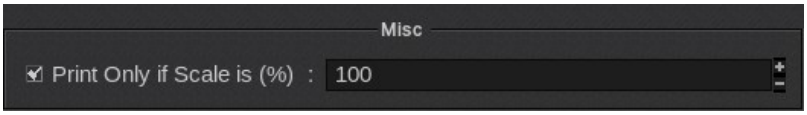
Multi-page



The **Multi-page** area lists options for printing multi-page documents.

- **Pages**: defines the specific page range you want to print.
- **All**: prints all pages in the multi-page document.
- **Collate**: groups the pages by individual copies (1-2-3...1-2-3...). When you print without it, the same pages are grouped together (1-1-1...2-2-2...).
- **Invert order**: prints in decreasing order instead of increasing order.

Misc



The **Misc** area lists an additional option.

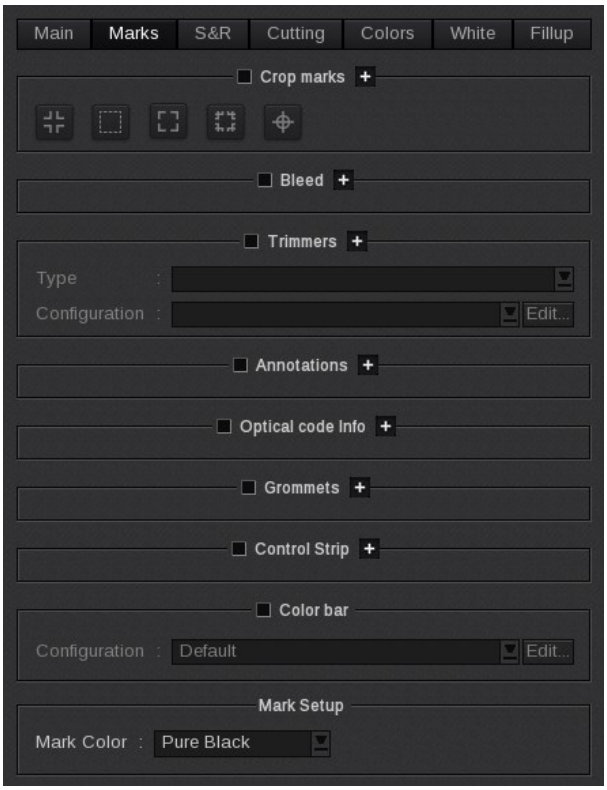
- **Print only if scale is (%)**: restricts the job from printing when the image does not match the defined percentage in this field.

If the percentage is not matching and the ***Print*** button is pressed, you will get a warning window.

Marks

The Marks tab is the second tab listed on the *Page Setup* window. The Marks tab is divided into nine areas: **Crop marks, Bleed, Trimmers, Annotations, Optical code info, Grommets, Control Strip, Mark Setup** and **Color bar.**

Note: Click on (**+**) to expand a section and display all its available settings.



Crop marks

The **Crop marks** area lists options for including crop marks on your print job.


Standard: applies standard crop marks to the print job.


Frame: applies frame crop marks to the print job.


Corner: applies corner crop marks to the print job.

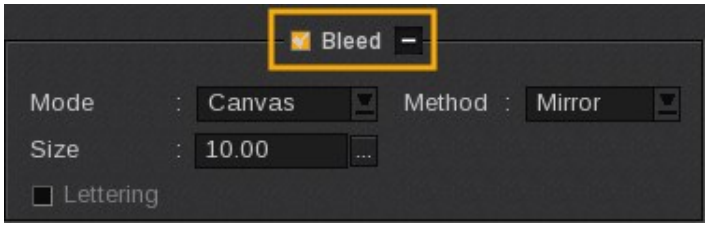

Tombo: applies tombo crop marks to the print job.


Targets: applies target crop marks to the print job.

- **Page number, File name** & **Date**: adds the page number (bottom right of the print), the file name (in the upper left) and the date to the print job (in the upper right).
- **Thickness**: defines the crop mark line's thickness. Option defaults to 1 pixel when not defined.

- **Size**: defines the *Standard*, *Corner* and *Tombo* crop mark sizes and the font size of the *File name*, *Page number* and *Date* options.
- **Margin**: defines the margin between the image and the crop marks.
- **Free Text**: adds free form text to the print job (in the bottom left).

Bleed



- **Mode**: Choose between *Standard* (the same value of bleed will be applied on all the image sides - Bleed in shown in purple on the preview) and *Canvas* (you will be able to select a different bleed value for each side - Bleed in shown in pink on the preview). When the Bleed is used with **ContourNesting** only the *Standard***Mode** is available.

If you cannot choose the **Mode**, make sure that **ContourNesting** is not already activated (S&R tab, deactivate **Step & Repeat** or change the **Step&Repeat** type from **Contour** to **Standard**).

- **Method**: choose between *Mask*, *Duplicate* and *Mirror*. The *Mask***Method** is only available when the bleed is used with **ContourNesting**.

The **Mirror** Bleeding for rectangular images is done using an orthogonal symmetry.

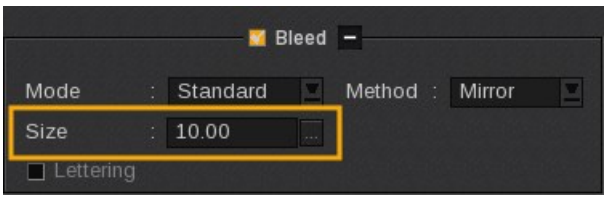
The **ContourNesting Mirror** Bleeding is done using the perpendicular angle of the tops to create the symmetry. If you use rectangular forms, it will seem stretched.

- **Size**: accordingly to the **Mode** chosen, the size is set differently.

Please note that the bleed **Size** can be 100 mm maximum (3.94 inches).

Please note that the bleed **Size** can be 10 mm maximum (0.39 inches) when used with **ContourNesting**.

- *Standard* **Mode**: the **Size** is applied on all the image sides.



If you use **Step&Repeat**, with **PrintBleed** in Standard **Mode**, the margin between the images will automatically be changed to twice the bleed **Size** if it was smaller. Be careful, if you reduce the bleed value, the margin between your images will not be changed, you will have to adjust it directly in the S&R tab.

View of a Standard PrintBleed, it is shown in purple in the Preview.

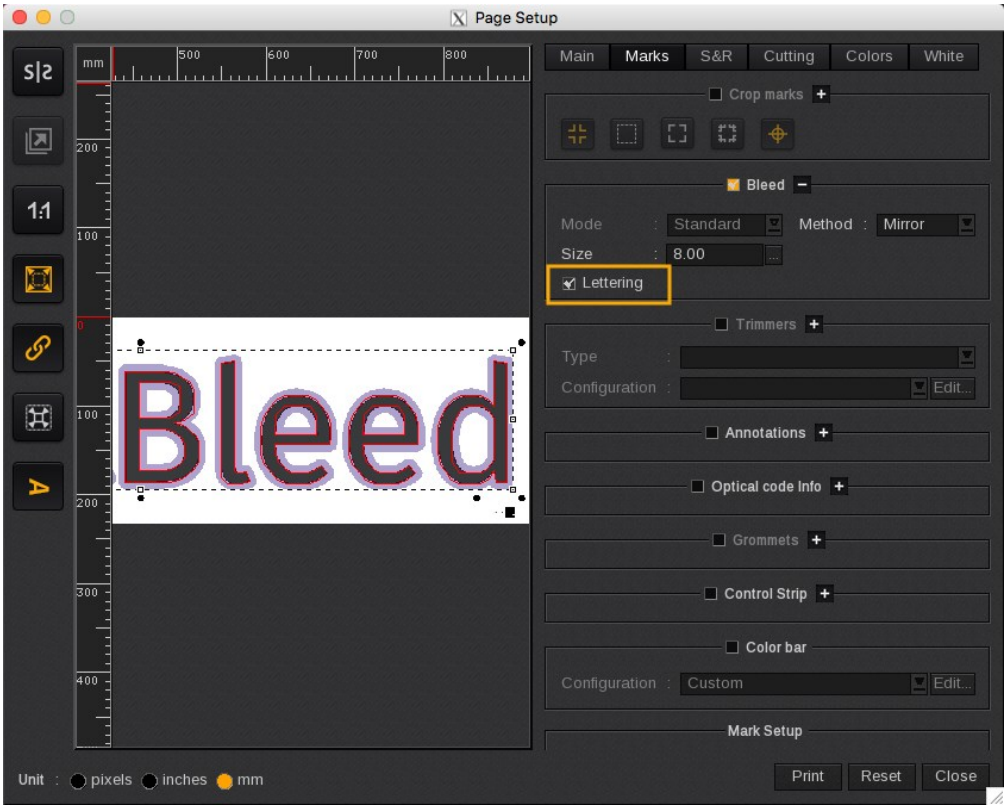
- *Canvas* **Mode**: use the ***[...]*** button to set specific **Size** for each side of the image.

Enter the value of the **Top**, **Bottom**, **Left** and **Right** sides. Put 0 if you don't want to print bleed for a side. Activating the **Homogeneous values** option applies the **Top** value to all sides. If this option is activated, whatever value you change, it will be applied to the other sides automatically so they keep the same value.

View of a Canvas PrintBleed, you can see the custom sizes in pink in the Preview.

- **Lettering**: The **Lettering** feature is the ability to bleed internal CutContours. It is mainly used for letters (O, Q, P, A,...) but can be used for any internal contour. This feature is available only when is activated.

Warning: This feature requires to have **properly prepared contours**. The object must be created as one shape with holes. Creating separated paths as external and internal CutContours will not work properly, you can use PathFinder in Adobe Illustrator for example.



Important notes

Be careful, when **PrintBleed** is used with the **ExtraMarks**, you must make sure you set enough margins to place your cut marks otherwise they will be located in the bleeding area.

If you add other marks, indicate a **Margin** at least equal to your **Bleed** if you don't want the elements (marks, text, date...) to be printed in the **Bleeding** area.

PrintBleed will not cover **Tiling+** overlap when some is defined. Thus, to properly use **PrintBleed** and **Tiling+** overlap: in the **Tiling+** interface, you must set overlap of the size of your bleed for internal borders on and, in the **Print** module, activate **PrintBleed** so external borders will be covered too.

Trimmers

Trim-O-Matik is an option. Its use may require the purchase of a specific key, depending on your RIP package.

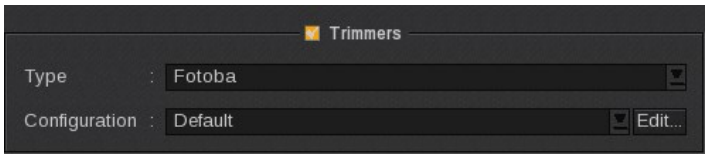
Configuration

You can save configurations to easily select and use.

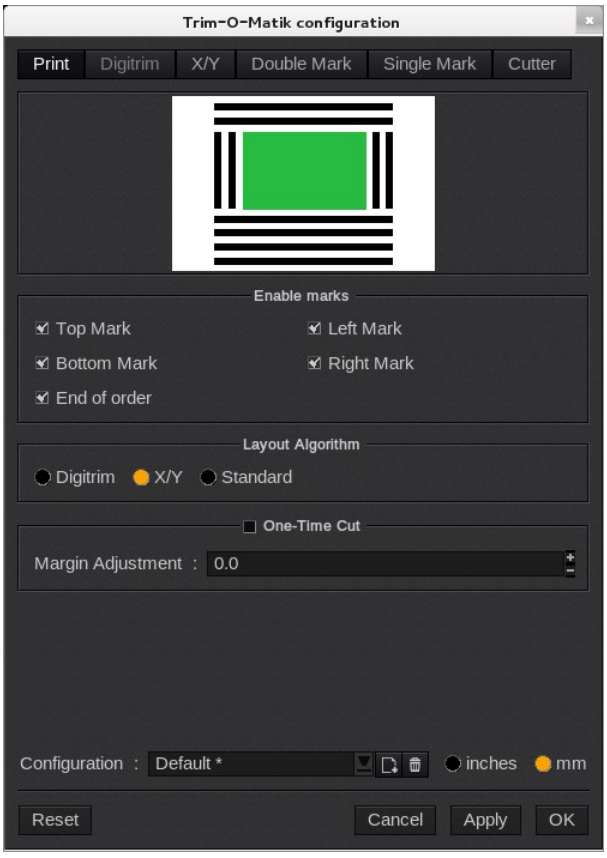
Be careful, configurations are linked to the trimmers. A configuration saved for **Fotoba** cannot be used for **Kala** for example.

Add a configuration

1. In the **Print** module, click ***Edit...***

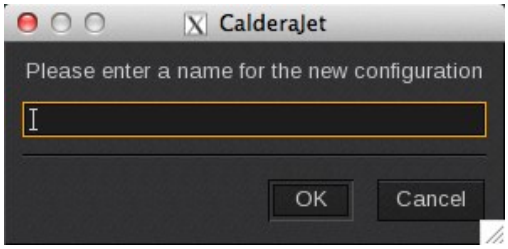


2. Set your **Trimmer** as you need it.
3. On the bottom of the window, click on the new configuration button: 



Where-as the **Trim-O-Matik** window is different for each trimmer, the bottom of the window, including the configuration saving buttons and the action buttons, is the same for every trimmer.

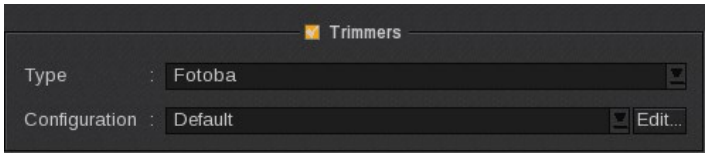
4. Then type the configuration's name and click ***OK***.



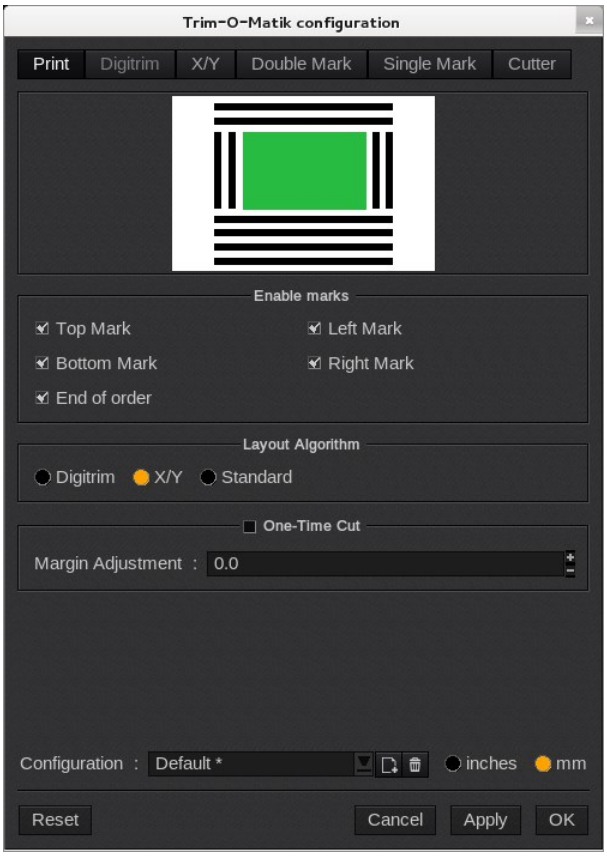
5. It will then appear in the trimmers configuration's list. This list is shared with all **Caldera RIP Print** module.

Edit a configuration

To edit a configuration, select it from the list then click the ***Edit*** button. The trimmer window will open with your specific configuration's settings. You can change the parameters and save the changes by clicking on ***OK*** or ***Apply***.

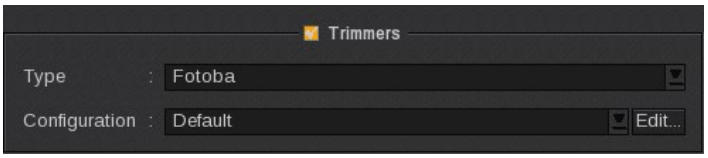


If you've just set a configuration and want to apply changes to another one, you can directly select it on the top of the *Configuration* window. As soon as you select a configuration, it becomes the current configuration and its parameters are displayed.
You can then go from one configuration to another without returning to the **Print** module.

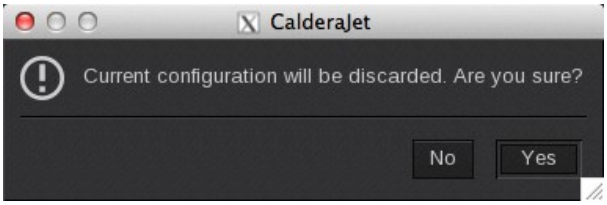


Delete a configuration

To delete a configuration, select it from the list and click ***Edit***.

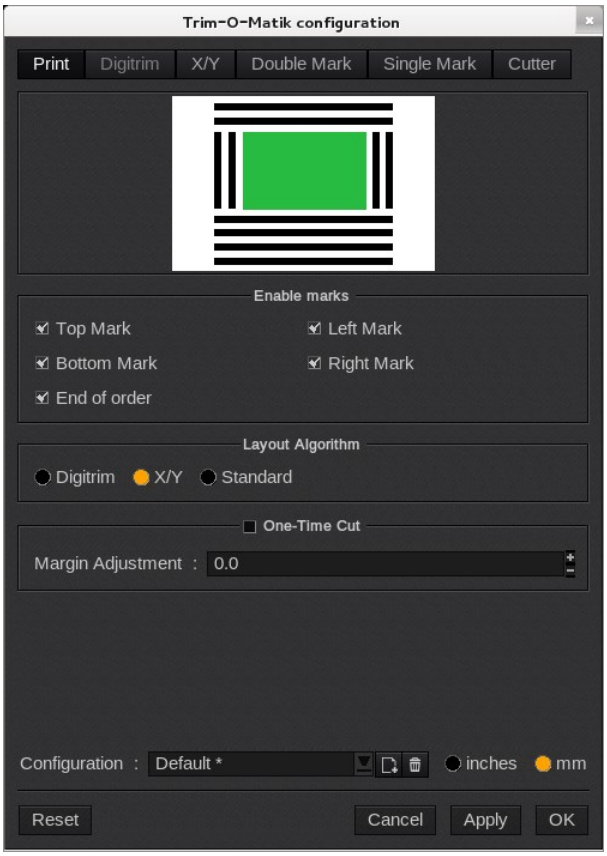


Then click on the trashcan button at the bottom of the window.
You are prompt for a confirmation to do the deletion.



Fotoba

Print



This tab allows you to choose the marks **location**, the **algorithm** used and the marks **adjustment**.

Enable marks

This part of the window allows you to set the **Digitrim** cut marks around the image. Depending on whether **Step&Repeat** or **Nest-O-Matik** are de/activated, its interpretation is different. The image at the top of the window is a symbolic reflection of the current setting.

Single mode

In normal mode (one image per page), this option determines which marks are present around the printed image. The selected marks will be printed, the deselected ones will not.

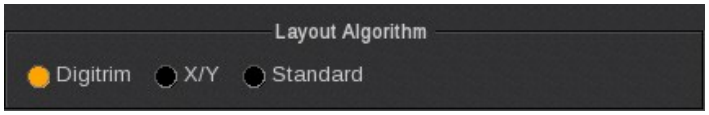
With Step&Repeat or Nest-O-Matik

When **Step&Repeat** or **Nest-O-Matik** is activated, this function then defines the **Digitrim** marks to be printed (or not) on the border of the group of nested images, provided the corresponding mark is located almost at the edge of the media. The reason for this is that some **Digitrim** and/or **X/Y WideRoll** cutters automatically detect the outline of the image, if it is located only a few centimeters from the media's edge. Thus, this setting is able to deactivate such marks. The **Digitrim** marks located between images and the ones that are placed on the outline (but far from the edge of the media) will always be printed independently from this setting.

End of order

You can add, at the end of the job, an "end of order" mark. It will indicate the end of the job.

Layout Algorithm



This part allows you to switch among three automated nesting algorithms: **Digitrim**, **X/Y** and **Standard**.

Digitrim

The **Digitrim** algorithm is meant for **Digitrim** cutters equipped with a mobile blade. The way the images are placed, the whole lot can be cut in two or three passes at the most (this depends on the advanced settings). The sheet or roll on which the images are printed must be inserted into the cutter following the same direction as the one in which the printing was performed. The machine will then cut this sheet in strips that will have to be inserted afterward as well, by rotating them by 90°. Depending on the case, you may need to perform a third pass, to get rid of all the finishing marks.
The **Digitrim** algorithm can also be used by **X/Y** cutters, without the vertical blades. This algorithm offers very good results when used together with **Step&Repeat** and **Nest-O-Matik**.

The Digitrim tab allows you to view and modify these algorithm parameters.

Example of a **Digitrim** layout with **Step&Repeat**

X/Y

The **X/Y** algorithm is only meant for **X/Y WideRoll** cutters Not only are these equipped with a mobile blade identical to the one in the **Digitrim** machines, they also have fixed blades able to cut the media vertically, in places that are defined exactly. The layout is designed in such a way that all the images are entirely cut in a single pass. For this very reason,

this nesting algorithm is much more restrictive when it comes to the dimensions of the printed images. Therefore, it yields the best results when used with **Step&Repeat.**

The X/Y tab allows you to view and modify these algorithm parameters.

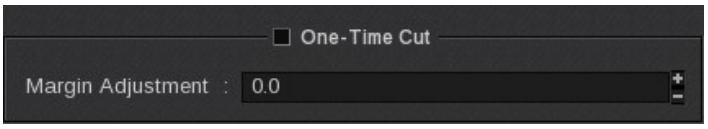
Example of a **X/Y** layout with **Step&Repeat**

Standard

The **Standard** algorithm allows you to perform a **Step&Repeat**, or a standard nesting, by surrounding the block with **Digitrim** marks.

Example of a **Standard** layout with **Step&Repeat**

One-Time-Cut

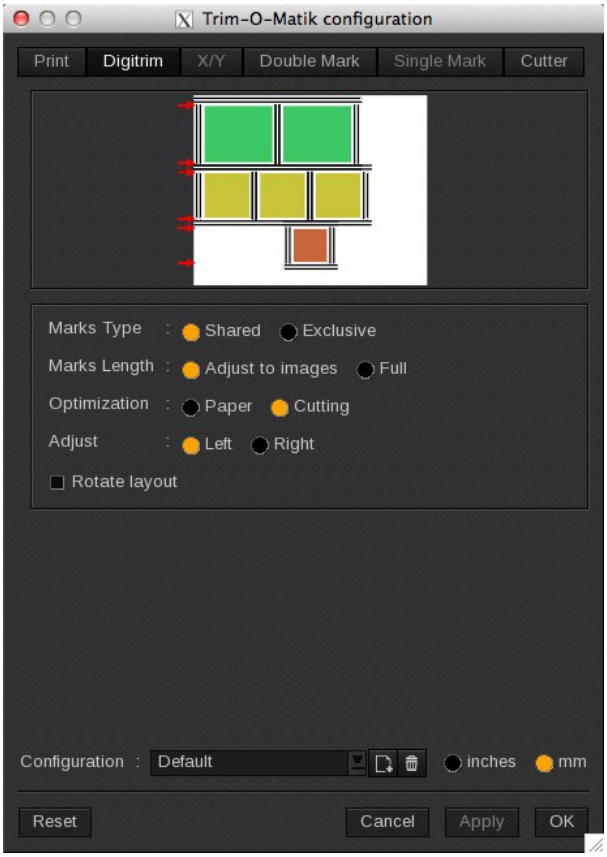


This function allows you to print several jobs consecutively in order to cut them all at once, as if they were but a single task. It works according to the following principle: the physical margins of the printer are taken into account in the **Digitrim** marks. Activating **One-Time Cut** implies the cancellation of one of the horizontal **Digitrim** marks: either the top mark or the bottom one, but never both at once. This is the reason why this mode can only be used with the **"shared"** type of marks (see the Digitrim and X/Y tabs). Please also note that by default, the bottom mark is kept.

One-Time-Cut enabled, the top-mark is automatically deactivated.

The algorithm automatically integrates the top and bottom margins, defined in the *Page Setup* of the print client. This margin is integrated in a smart way to the white parts of the **Digitrim** marks. The **Margin Adjustment** value is a correction to apply when the actual margin of the printer does not exactly correspond to the defined page margins.
The moment **One-Time** Cut is activated, the size of the marks are checked, and the user may be offered to see a correction applied. To allow the use of **One-Time Cut**, the following criteria must be verified: the sum of the top and bottom margins of the printer and of the adjustment value of the page must not be low enough to be encompassed in the bottom or top white part of the **Digitrim** mark. This must of course remain within the limits of the maximum thickness of the mark defined for the current cutter. If the margins are too wide, it will be impossible to use the **One-Time Cut** function.

Digitrim



This tab becomes available when you choose the **Digitrim** layout algorithm in the Print tab. It allows you to define the advanced parameters of said algorithm. The image in the top part of the window is a symbolic representation of the various possible settings.

Marks Type

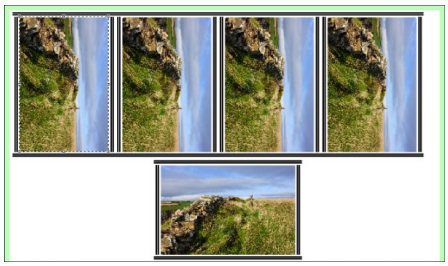
This function lets you choose between **shared** and **exclusive** marks. In **shared** marks mode, images have only one mark in common, whereas in **exclusive** marks mode, each image has its own **Digitrim**; this way, marks are split between the images.

Example of **shared** marks

Example of **exclusive** marks

Marks length

This function allows you to choose between **adjusted** and **full page** marks. **Adjusted** marks have the same length as the adjacent image. **Full page** marks are placed on the whole width of the useable media. This can be useful in some circumstances, to make the detection of the marks during the cutting easier.



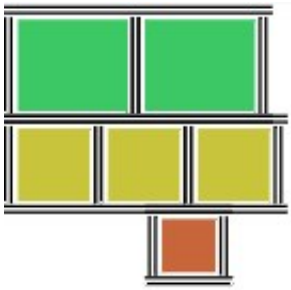
Example of marks **adjusted** to images

Example of marks **full** page

Optimization

This lets you choose the **optimization** level of the layout. In **Paper** mode, the algorithm attempts to place the images so that they will use as little media as possible. Some of these images will require up to three passes to be fully cut. In **Cutting** mode, the images are placed so that two passes are enough to cut them completely; this is done to the detriment of a more economical use of the media.

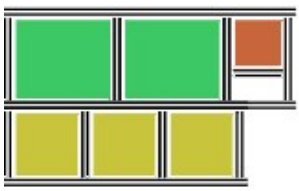
Example in **Paper** mode: three manipulations needed to cut.



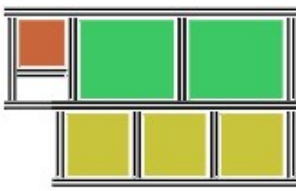
Example in **Cutting** mode : two manipulations needed to cut.

Adjust

This option allows you to choose the edge for the adjusting of the images. When this is possible (taking into account the placing of the sensor on the cutter), the algorithm attempts to paste the images along the selected edge.



Left alignment



Right alignment

Note: In the case of **full page** marks, if it is possible (notably through the lack of a finalizing stroke), the images are from the start, placed along the edges. This way, in a configuration with **full page** marks and **Cutting optimization**, the images will always be placed along the edge of the paper.

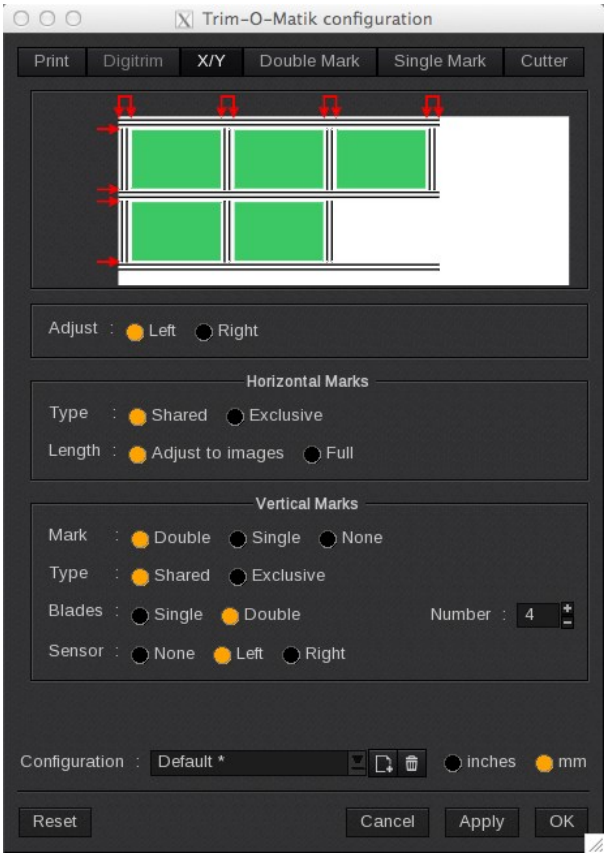
Rotate layout

When this mode is activated, the **Digitrim** placing is done in such a way that the printed tiles are rotated by 90° in the cutter. In other words, the first **Digitrim** cutting pass is processed from left to right (or from right to left), and not from top to bottom anymore, contrary to what it was like when using the normal **Digitrim** mode. This allows you to use a media larger than the maximum width of the **Digitrim** cutter. You will always be sure that the block of images thus created is short enough, in terms of height, to be used in the cutter.

Note: In order to create tiles to place in the Digitrim cutter, you may use the printer's cut function (or other means of manual cutting) to cut the media after each printed block.

Note: If this mode is used with **Nest-O-Matik**, also setting the maximal printing height is useless. What will automatically be taken account in this case is the maximal width of the cutter.

X/Y



When you choose the **X/Y** layout algorithm in the Print tab, the X/Y tab then becomes available. It gathers all settings meant to control the behavior of the nesting application for the **X/Y WideRoll** cutters. The image located in the top part of the window is a symbolic representation of these various parameters.

How the X/Y nesting algorithm works

Before the first print, the configuration of the vertical blades is totally free. Their placing is determined by the nesting algorithm, depending on the images and on the maximum amount of the blades on the machine. Once the first print is completed, the configuration of the vertical blades is then kept, until the user explicitly asks for it to be reset. This allows you to obtain the configuration (for the vertical blades) that is the most adapted to the printed images; it also gets rid of the need to continuously move the blades on the cutter between prints.
If an image cannot be nested, due to its dimensions being incompatible with the configuration of the vertical blades, the user will be warned, and resetting said configuration will be possible.
The following events trigger the fixing of the blades:

- Printing / printing in a file / computing the reprint of an image in simple copy or multi-copies.
- Printing / printing in a file / computing the reprint of an image in **Step&Repeat** mode.
- Finalizing an *Autonest* job in **Nest-O-Matik**.

The **X/Y** cutters often allow the use of two types of **vertical blades**: **simple** blades (single edge) or **double** blades, which are in fact two simple blades places at a fixed distance from each other (usually, this distance is 8 mm). The width of the **double** blades is defined in the Cutter tab. The current nesting algorithm does not yet allow the use of single and double blades at the same time in the same nesting job.

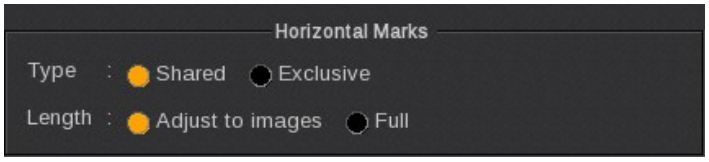
Adjust

Left or **right**. This setting is the same as the **Adjust** one in the Digitrim tab, and indicates the edge on which to align the images.

Adjust **Left**

Adjust **Right**

Horizontal marks



Type

This option allows you to choose between **shared** and **exclusive horizontal marks**. In **shared** marks mode, only one mark is common to the different rows of images; in **exclusive** marks mode, each row has its own **Digitrim** mark (two **Digitrim** marks are then placed between the rows).

Note: Contrary to vertical marks, **horizontal** marks are always composed of two lines, defined in the Double Mark tab.

Horizontal Marks **Shared** Type

Horizontal Marks **Exclusive Type**

Length

This function allows you to choose between **adjusted** and **full page** marks. **Adjusted** horizontal marks have the same length as the adjacent image. **Full page** marks are placed on the whole width of the useable media. This can be useful in some circumstances, to make the detection of the marks during the cutting easier.

Adjusted marks

Full page marks

Vertical Marks

Mark

On **X/Y WideRoll** cutters, the **vertical marks** are often inactive, since the vertical blades must be fixed manually by a technician. This is the reason why these marks are not mandatory. They can be made up of two lines (**Double**), or a single line (**Single**), or simply omitted (**None**).

The **double vertical marks** are defined in the Double Mark tab, and are identical to the **horizontal marks**. The **simple vertical marks** are defined in the Simple Mark tab, and are completely independent from the double marks.

You can also choose not to print marks by selecting: **None**.

Double Mark

Single Mark

None mark

Type

The spacing among the different images in a row partly depends on the **vertical marks** that are used.

Shared marks

For **vertical marks** of the **shared** type, the following cases can be observed:

- In the case of **double** marks, the spacing between two nearby images is identical to the width of the mark (as per defined in the Double Mark tab).
- In the case of **simple** marks, the spacing between two nearby images is the same as the width of the mark (as per defined in the Simple Mark tab).
- In the case where **no vertical mark** would be present, the spacing between two nearby images would then depend on the type of **blades** used. With **simple blades**, the images are placed on top of each other to allow the cutting to be performed exactly in between them. With **double blades**, the images are spaced out by the same width as that of the blades (normally, this width is of 8mm, but if your specific needs are different, it can be redefined in the Cutter tab).

Note: Please note that when a vertical mark is printed, it defines the spacing of the nearby images (it is not the vertical blade that does it).

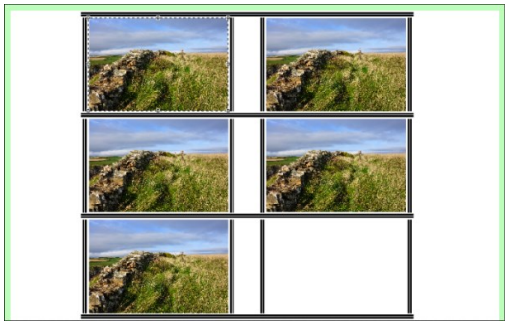
Shared Mark **Double**

Shared Mark **Single**

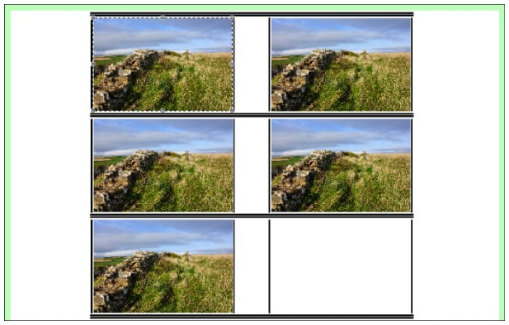
Shared Mark: **None**

Exclusive marks

For **exclusive vertical marks**, the spacing between nearby images of the same row is determined by the minimum distance between two nearby vertical blades. This size is fixed by the manufacturer, and can be specified in the Cutter tab. The spacing between two images will then be equal to this minimum distance, possibly added to the width of the blades, when double blades are used.



Exclusive Marks **Double**



Exclusive Marks **Single**

Exclusive Marks **None**

Blades

The **Blades** settings allows you to choose the type of vertical blades that are to be used. The difference will be noticeable with "**None**" and **shared** Marks.

With no **vertical marks**, the space between the images is equal to the **blades** width: none for a **single blade** and ordinary 8 mm for the **double blades** but it can be specified in the Cutter tab).

Single blades

Double blades

Number

The **Number** field determines the maximum amount of blades to use for each nesting algorithm.

Sensor

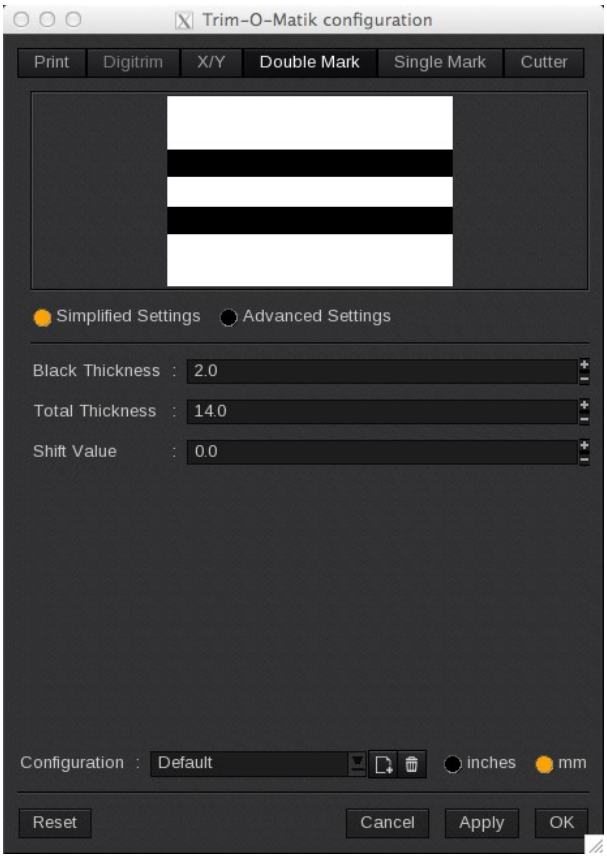
This option allows to print a simple, continuous line on the left or on the right of the block of printed images. It is meant to be used with **X/Y** cutters equipped with a sensor, and whose role is to adjust the vertical blades to correct the deformation of the media.

Left sensor mark

Right sensor mark

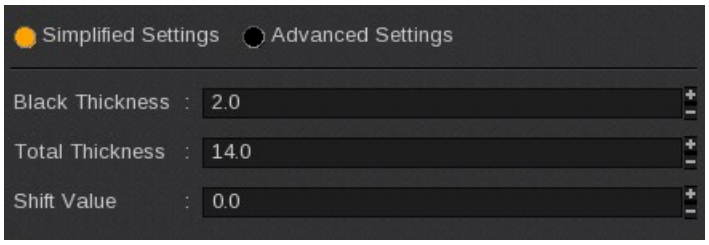
No sensor mark

Double Mark



In this tab, you can define the **double mark** used by the **Digitrim** algorithm (it can also be defined as a **horizontal mark** by the **X/Y** algorithm). The mark is made of two black lines and three alternated white lines. Each of these elements can have a different width.
Two kind of settings are available here: a **simplified one** (by default), and an **advanced one**.

Enable marks



The **Simple settings** makes it so that the black strokes all have the same width and that the external white ones have twice the width of the internal stroke. Using the fields available in the interface, it is thus possible to set the width of the black strokes, as well as the total width of the mark. As a result, the width of the white lines is automatically determined, according to the criteria listed above.

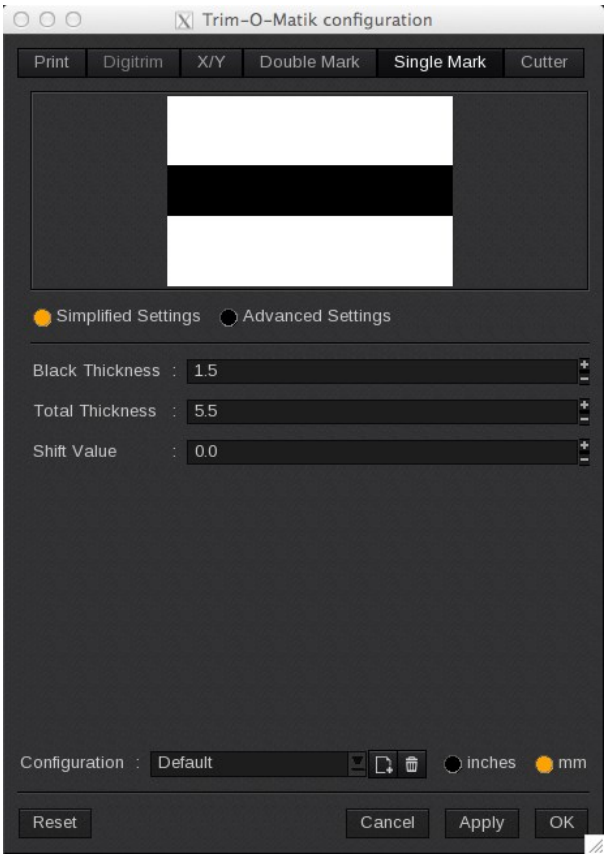
Shift Value

The **shift** value setting is an additional one. It allows you to throw the mark off center by distributing the available space between the top and bottom exterior white lines. When the shift is nil, the top and bottom white lines are of exactly equal size. If the shift is positive, the top white line is increased by the same amount, and the bottom line decreased by the same amount as well. If the shift is negative, the contrary applies.

Advanced settings

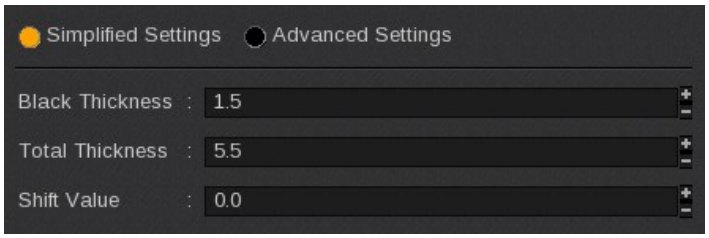
The **advanced setting** allows you to set each of the five elements composing the mark independently (the two black strokes and the three white strokes). The total width of the mark is given for your information only, under the settings part.

Single Mark



This tab can only be accessed in the case of an **X/Y** layout, for which it allows the user to define the **simple vertical mark** that the associated nesting algorithm will use. Contrary to the **double mark**, this one only contains one black stroke, surrounded by two white strokes. Apart from this, the settings available here are quite close to the ones of the double mark.

Simplified settings



In the **Simple** interface, you can define the thickness of the black line and the total width of the mark.

Shift Value

The **shift** value setting is an additional one. It allows you to throw the mark off center by distributing the available space between the top and bottom exterior white lines. When the shift is nil, the top and bottom white lines are of exactly equal size. If the shift is positive, the top white line is increased by the same amount, and the bottom line decreased by the same amount as well. If the shift is negative, the contrary applies.

Advanced settings

The **advanced** interface allows you to modify the width of every stroke, independently. The total width of the mark is given for your information, directly under the settings.

Cutter

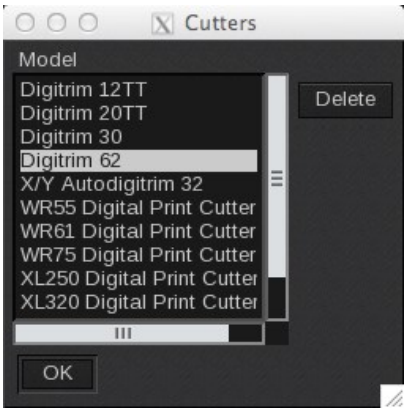
This tab allows you to define certain characteristics of the cutter to be used (these values are often given to you by the vendor).

Model

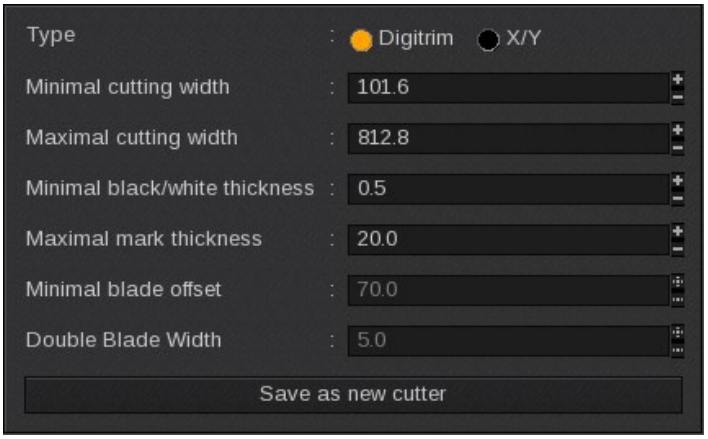
A list of predefined models is available; it is also possible for you to create new ones.
Choosing a **cutter** in the list copies the corresponding values in the other fields. When one of these values is changed manually, the **model** switches to *Custom*. The current settings can always be saved by creating a new **cutter model**.

Manage

The ***Manage*** button, at the right of the drop-down list containing the names of the models, opens a window in which you can remove existing **models** from the said list.



Settings



Type

It indicates the **type** of **cutter**. **Digitrim** machines are equipped with a horizontal mobile blade, and allow the use of the *Digitrim* layout algorithm. **X/Y** machines also have fixed vertical blades, which can be positioned manually. They allow the use of the **X/Y** algorithm, but also of the **Digitrim** one, provided the vertical blades are not activated.

Minimal cutting width

This corresponds to the dimensions of the smallest image that can be cut according to the sensor's width.

Maximal cutting width

This corresponds to the maximal size of the media that you can insert into the cutter. If you want to use a media whose size is bigger, only a part of its width will be used for the nesting, and you will need to manually cut said media to then be able to insert it into the cutter.

Minimal black/white thickness

This is the minimal thickness that a black or white stroke composing the **Digitrim** mark needs to have so that it can be recognized by the sensor of the machine. Usually, this width is equal to 0.5 mm.

Maximal mark thickness

This is the maximal width of a **Digitrim** mark, so that the latter can be detected by the cutter; it is normally 2 cm. This setting plays a determining role when the **One-Time-Cut** function is used. The **Digitrim** mark cannot be larger than the width fixed here.

Minimal blade offset

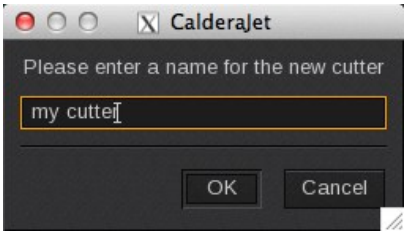
This defines the minimal distance between two neighbor vertical blades. Usually, this distance is 7 cm. This is due to the way the blades are fixed. This setting is only available for **X/Y** cutters.

Double Blade Width

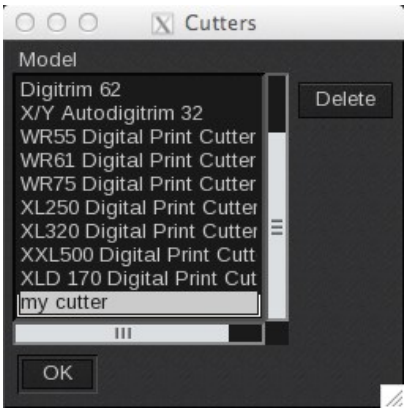
The distance at which the two knives for the double blades are placed.

Save as new cutter

This button allows to keep the current settings of the Cutter tab as a new model. Clicking it displays a dialog box in which you can then type the name for the new cutter.



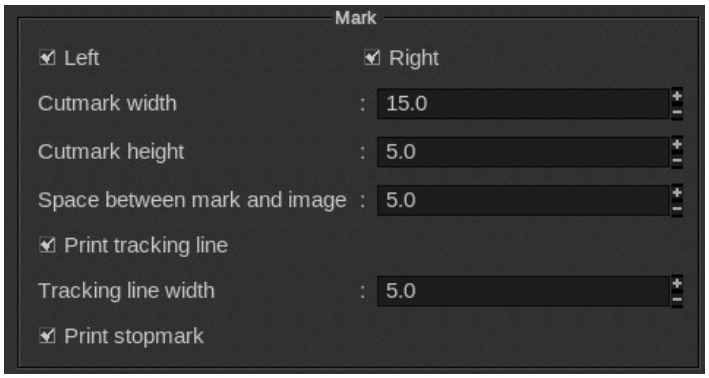
You will find your model in the list and you can also delete it using the ***Manage*** button.



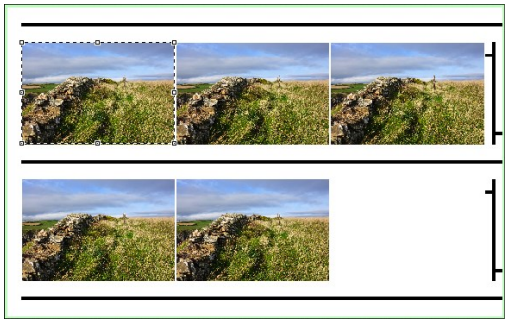
Crest

Print

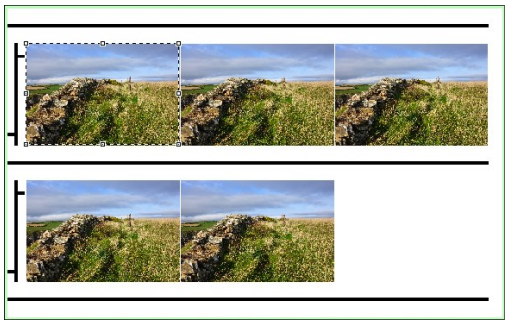
Mark



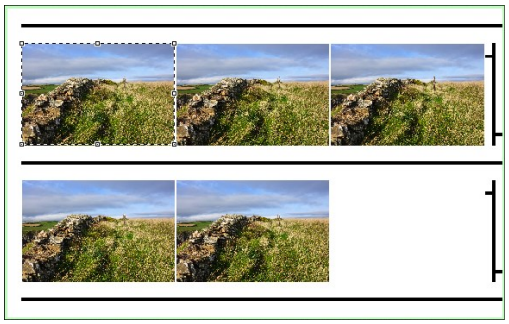
The cut marks are the little horizontal dashes located on the image line.



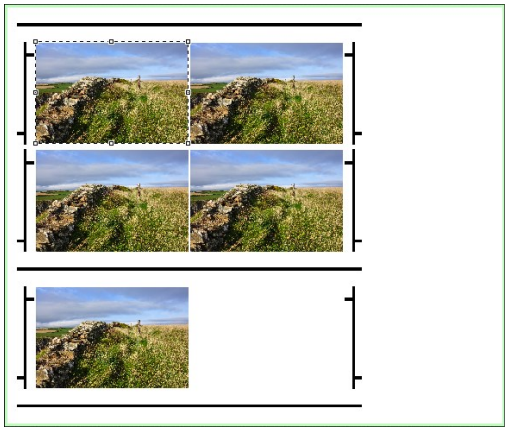
Left / Right
Print cut marks on the **left** and / or **right**.



Left Marks



Right Marks



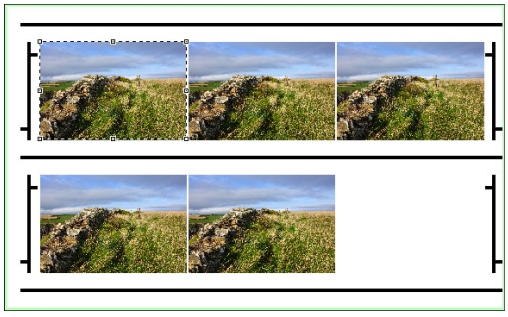
Left and **Right Marks**. On our example, there was not enough space to add a second mark on the line with three images so images had to be nested only two by two and rearranged on 3 lines.

Cut mark width
It defines the horizontal space taken by the cut marks and their length. It is 15 mm minimum.

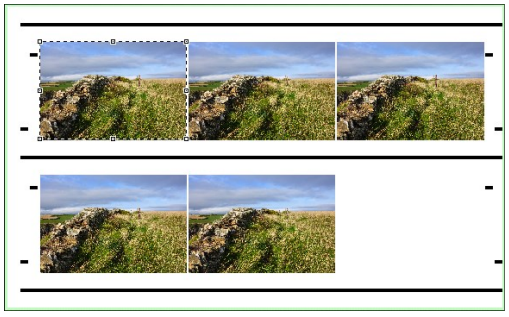
Cut mark height
It defines the cut marks thickness. It is 5 mm minimum.

Space between mark and image
It defines the minimal distance between the mark and the image. It is 5 mm minimum.

Print Tracking line
This option allows you to print a simple, continuous line on the left or on the right of the block of printed images. It is meant to be used with **X/Y** cutters equipped with a **sensor**, and whose role is to adjust the vertical blades to correct the deformation of the media.



Tracking line activated



Tracking line deactivated

Tracking line width
It defines the thickness of the **tracking line**. It is 5 mm minimum.

Print stopmark
Activated by default. You can deactivated this option if you use Row cut. For any other purpose, we recommend you no to.

Other settings

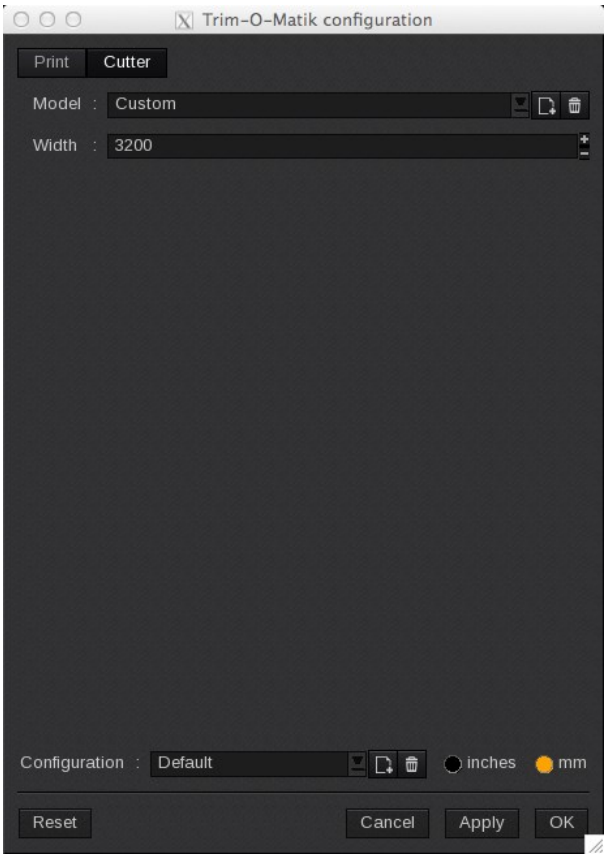
Horizontal and Vertical space between images
These fields allow you to define the space between the images on the same line (**horizontal**) and on the same column (**vertical**). Indeed, when the lines are full, no cutting line is added between them.

Example of two full lines: **horizontal space** = 4 mm and **vertical space** = 12 mm.

Add positioning lines for slitters
This option allows you to add, on the job, marks to position the slitters.

Max number of elements on a row
It limits the maximal number of images that can be placed on a line, even if there is still space on the media.

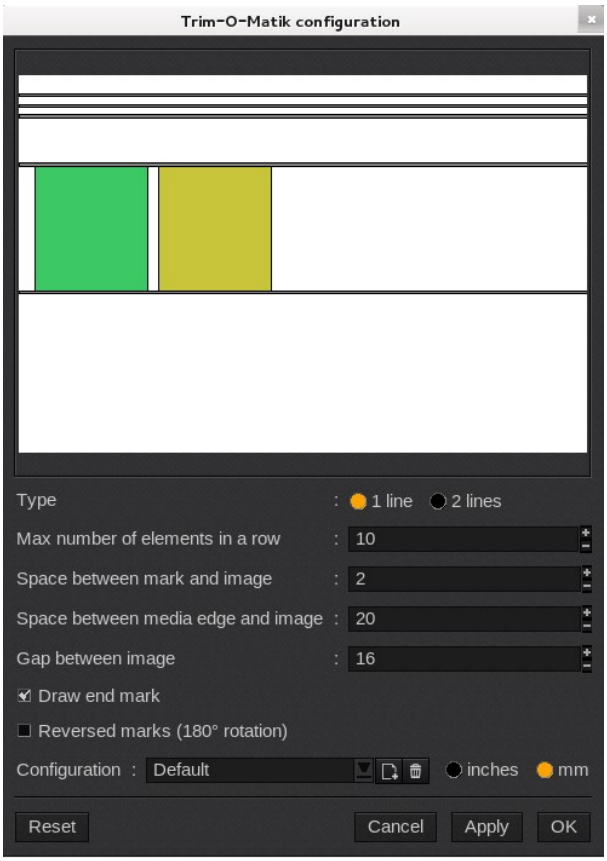
Cutter



In this tab, you can save several **models** of **cutters** and add in their **width**.

Kala

Settings



Type
Choice of the **type** of mark used between **1 line** and **2 lines**.

1 line Type

2 lines Type

Max number of elements in a row
This field defines the maximal number of elements that can be placed on a line.

Space between mark and image
Indicates here the space between the cut marks and the images. It has to be 2 mm minimum.

Space between media edge and image
Space between media edge and image (left and right) and the images.

Gap between image
Fill in the minimal distance between the images on the same line.

Draw end mark

You can add, at the end of the job, an “end mark”. It will be placed 13 cm after the last line of images to indicate the end of the job. When your job ends with a non-full line of images, two blocks will be created and each one will have an end mark:

- A block with the full lines
- A block with the uncompleted line

Example **without** end mark

Example **with** an end mark

Example with a non-full line and **without** end mark

Example with a non-full line and **with** end marks

Reversed marks (180° rotation)

This reverses the cut marks and the images position. The images are right-aligned and the end mark of the job is drawn above the images.

This tool is used for jobs which are printed on a roll and intended to be cut from the roll too. The cut is then made easier as long as the jobs present themselves in the right direction.

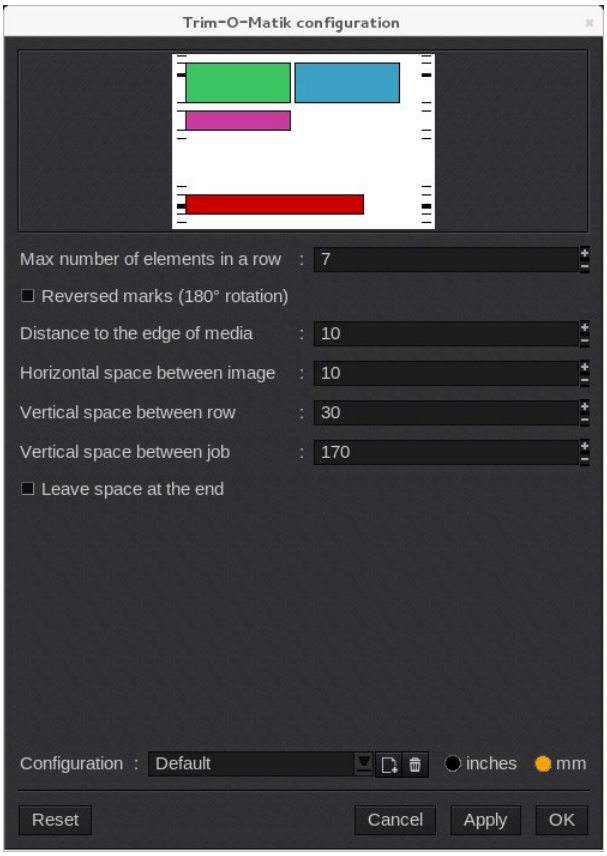
Be careful, with this, the last job printed is the first job to be cut.

Example **without** the reversed marks

Example **with** the reversed marks

Meevo

Settings



Max. number of elements in a row

Even if there is still enough space to add more images in the row, this settings defines the maximal number of elements that can be placed on a line, regardless of their sizes. This setting has a range from 1 to 7.

In our example, the max number of elements in a row has been set to 2.

Reversed marks (180° rotation)
This reverses the cut marks. This is useful for printers who has dye-sublimation and rewind the printed roll at the calender. In that case, if the marks are not reversed, once the operator goes to the trimmer he will get the end of the printing first, so the marks will be wrong.

Example without the reversed marks

Example with the reversed marks

Distance to the edge of media
Indicates here the space between the cut marks and the edge of the media. The range is from 0 to 15.

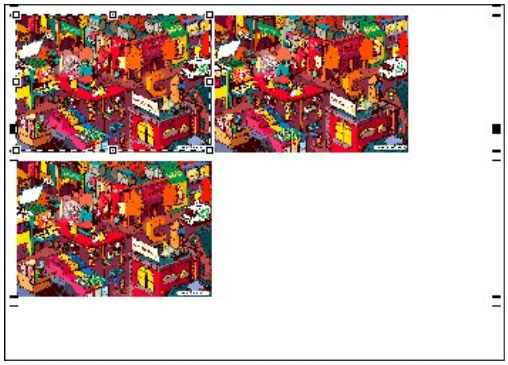
Horizontal space between image
Fill in the distance between the images on the same line. The range is from 0 to 30.

Vertical space between row
Fill in the distance between the image rows. The range is from 30 to 999.

Vertical space between job
Fill in the distance between the jobs. The range is from 30 to 170.

Leave space at the end
Add the value set in the **Vertical space between job** field at the end of the job.

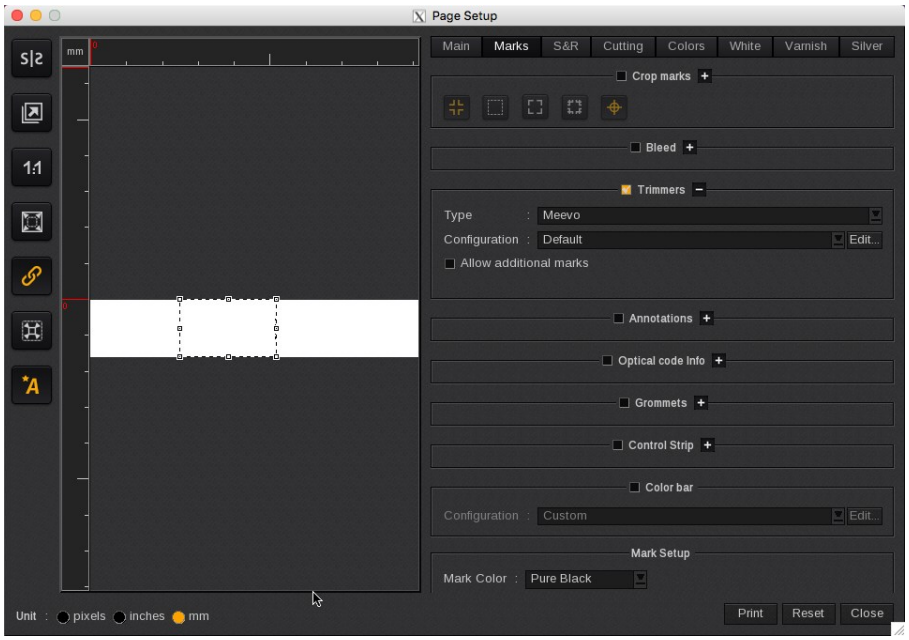
Example without the option



Example with the option enabled

Important note

Be careful, to work with the **Meevo** Trimmer, images have to be 390 mm high minimum. If there are not, you may not see the Trimmers marks or even the image on the preview, like displayed in the example below.

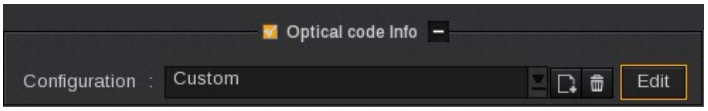


Annotations

The **Annotations** area is where you can choose to include notes in the print job. When enabled the printer settings of the print job will appear underneath the print in addition to the notes you enter here.

- **Update Text**: enter your additional notes in the free form text box and when finished click this button to save your changes.
- **More details**: adds additional information called **Details** in the notes.
- **Height**: defines the height of the annotations area.
- **Font Height**: defines the font size of the text in the annotations area.

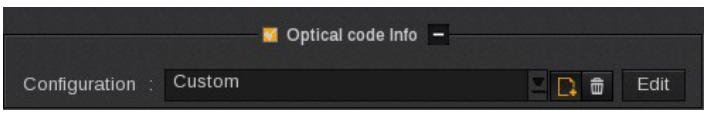
Optical code info



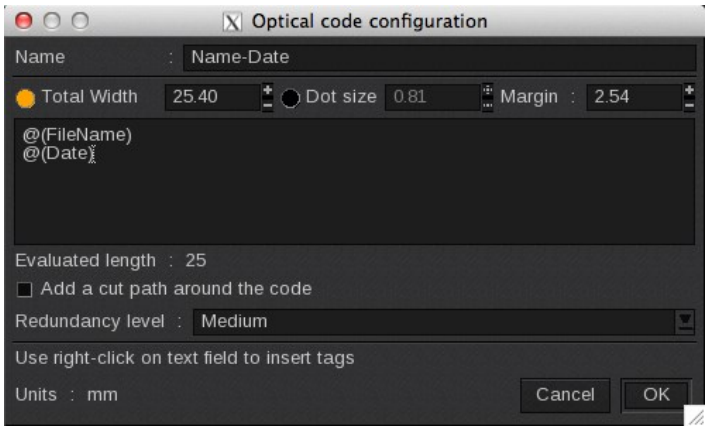
The **Optical code info** area is where you configure optical code information such as QR codes.

Add a configuration

To create a new configuration click on the new button:



The *Optical code configuration* window opens. Type the **Name** you want to give to your configuration.

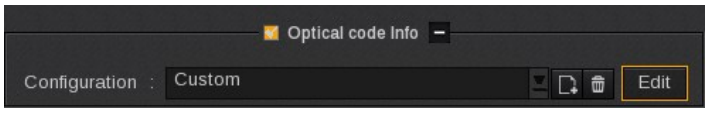


Then set your QR Code and click ***OK*** to save the new configuration. It is automatically applied and added to the configuration list.

If you open a configuration and change its name, your previous configuration will still exist, and a new configuration with the new name you set will be created. See below to delete a configuration.

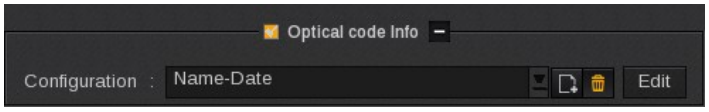
Edit a configuration

To edit a configuration, select it from the list and click the ***Edit*** button. The *Optical code configuration* window opens. Change the settings and then click on ***OK*** to save.



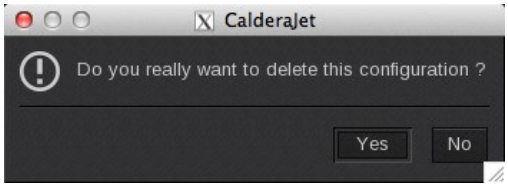
Delete a configuration

To delete a configuration, select it from the list and click on the trash can icon.



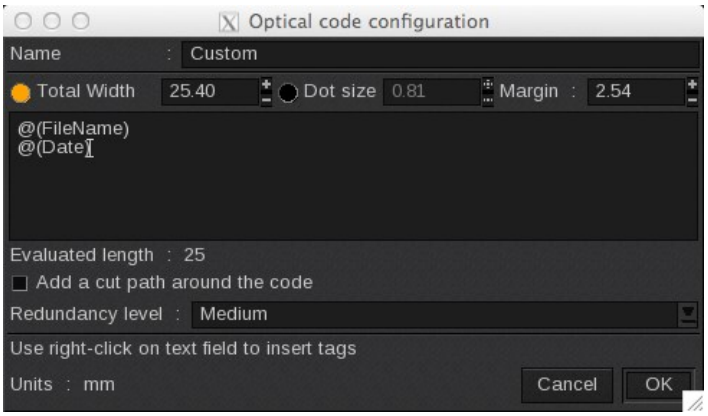
You will be prompted to confirm you want to delete the configuration. Click ***Yes*** to confirm.

You cannot delete the « Custom » configuration. However you can change its parameters.



Optical Code Configuration Window

The *Optical code configuration* window allows you to define the parameters of your QR Code.



Size

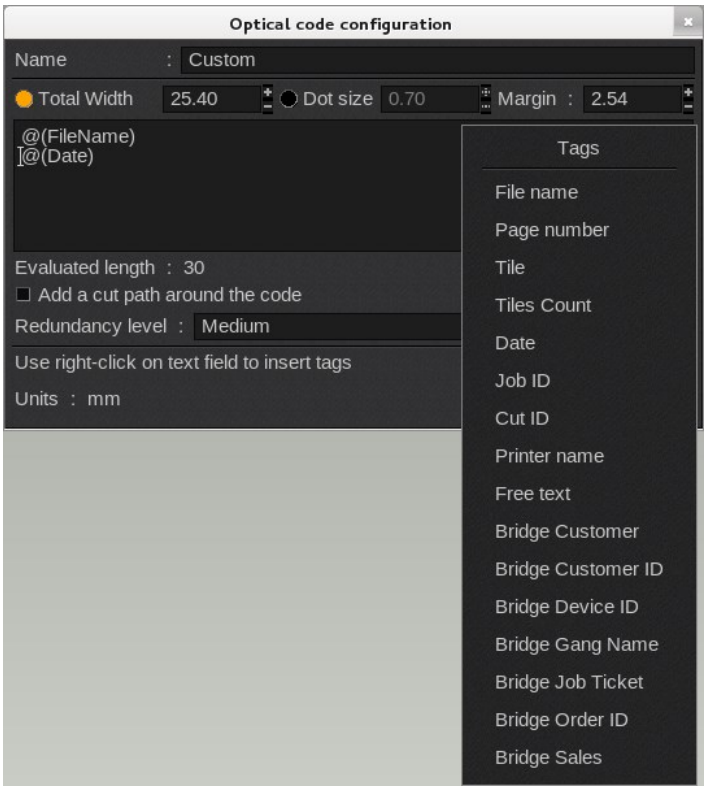
The size defines the **Total Width**, **Dot size**, and **Margin** of the QR Code.

- **Total Width** or **Dot size**: only one of these parameters can be activated at a time. **Total Width** includes margins.
- **Margin**: margins that appear around the QR code.

When you change the margins, the width adapts itself with these new constraints.

Text box

You can enter free form text and/or right-click and select tags to enter into the text box. The tags appear as: @(VARIABLENAME). The tags generate automatically.
Available tags are: **File name**, **Page number**, **Tile**, **Tiles Count**, **Date**, **Job ID**, **Cut ID**, **Printer name**, job's comments: **Free text**, and CalderaNexio elements: Jobticket, Customer, Customer ID, Sales, Order ID and Gang Name.



Tags are useful when you use pre-established configurations for **Workflow** or **QuickPrint**. The information you need is automatically inserted into the QR Code.

Evaluated length

The **Evaluated Length** displays the number of characters the string will have. It is calculated based on the information in the text box. It is calculated using the real value of the tags and free form text.

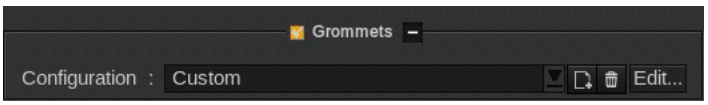
Add cut path around the code

Enable the option **Add cut path around the code** to add a cut contour to the QR Code. This is helpful when you want to place the QR Code on the back of your print.

Redundancy level

The QR Code does not only contain one repetition of the information but several. Accuracy is improved with more repetitions; however, increasing the redundancy level will also increase the size of the QR Code. Options include: *Low*, *Medium*, *Quality* and *High*.

Grommets

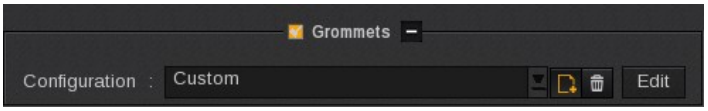


Adding grommet marks to a print job is easy and saves time during post production.

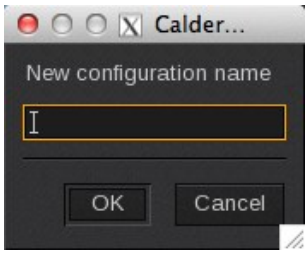
Note: grommets cannot be used with **Textile** and **Contour Step&Repeat**.

Add a configuration

To create a new configuration click on the new button.



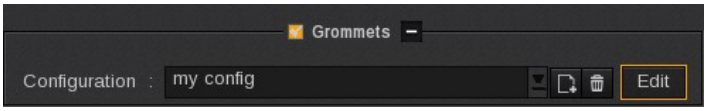
Type in the configuration's name and click ***OK***.



Then set the parameters and click ***OK*** to save the new grommet configuration. It is automatically applied and added to the grommets configuration list.

Edit a configuration

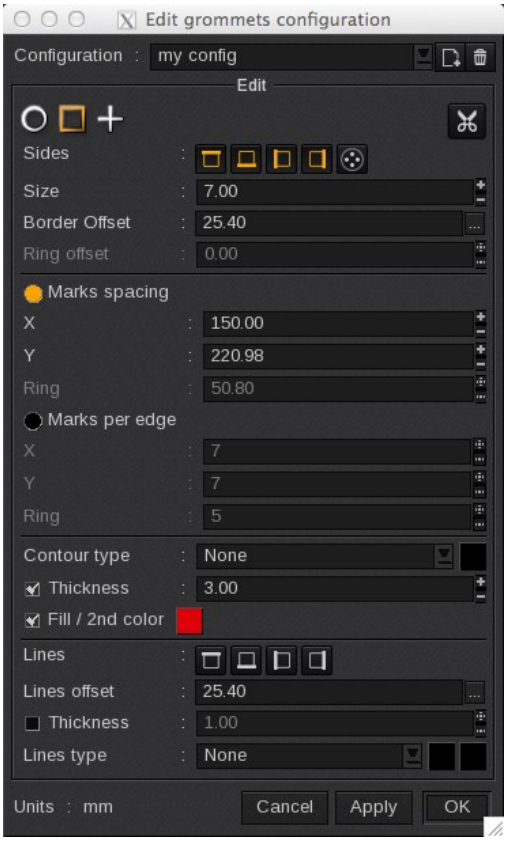
To edit a configuration, select it from the list then click the ***Edit*** button.



The *Edit grommets configuration* window opens. Change the settings and then:

- Click on ***OK*** to save your changes and to exit the *Edit grommets configuration* window. This option applies the configuration listed in **Configuration** field to your print job.

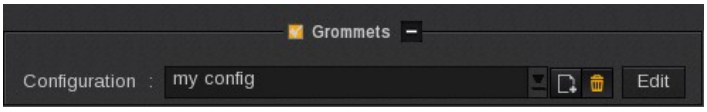
- Click on ***Apply*** if you want to continue to work within the *Edit grommets configuration* window.



Delete a configuration

There are two options for deleting a configuration:

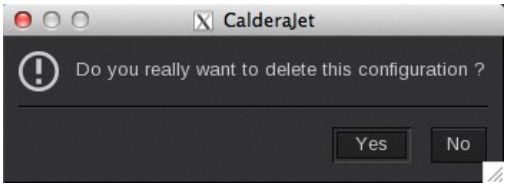
- Select the configuration from the list and click on the ***Trashcan*** icon.



- Open the *Edit grommets configuration* window by clicking on ***Edit***. Then select the configuration from the list and click on the ***Trashcan*** icon.

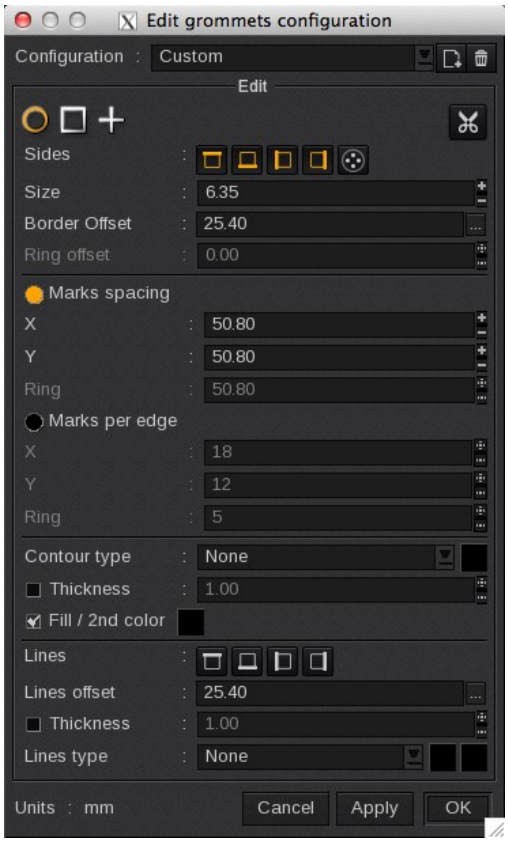
In either case, you will be prompted to confirm you want to delete the configuration. Click ***Yes*** to confirm.

You cannot delete the « Custom » configuration, you may only change its parameters.



Edit Grommets Configuration Window

The *Edit Grommets Configuration* window allows you to define the parameters of your grommets.



Shape and position

Grommet mark options are listed below:

Note: When you make a selection for grommet marks, your selection applies to all the grommet marks unless otherwise specified.

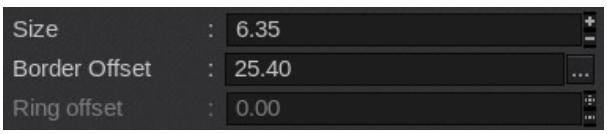
- **Shape**: select from **circle**, **square** and **cross**:

- **Cut contour** when enabled a cut contour line is embedded in the shape of the grommet selected above. The contour outline and fill is no longer printed (if applicable).

- **Sides** where grommets will be added. The last button adds an ellipse on which grommets will be placed.

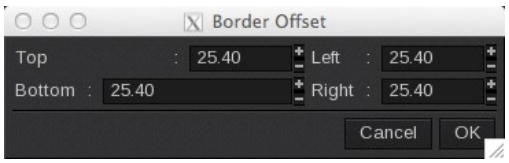
- **Size**: defines the diameter for round grommets, and the length for either square or cross grommets

The size is indicated in the module's unit.



- **Border Offset**: defines the distance between center of the grommets and the image border. For example, a **Border Offset** equal to zero will align the center of the grommet to the image border. The ***[...]*** button opens the following window to define the specific offset of each side.

Margins are included in the global size of the poster so if the offset is smaller than the margin size, the center of the grommet will be in the margin.



Values are then reported in the grommets window in this order: top, bottom, left then right.

- **Ring offset**: adds additional distance between the ellipse and the other grommets.

Number of grommets

There are two options available for placing grommets on a graphic. The options are mutually exclusive so they cannot be used at the same time

- **Marks spacing**: defines the maximum distance between the center of the grommets on the X and Y axis. Grommets will dynamically appear based on the information entered in the X and Y fields. You cannot create a distance longer than the image size. **Ring** applies only to the grommets placed in the shape of an ellipse and defines the maximum distance between those grommets.
- **Marks per edge**: places the number of grommets you specify in the X and Y fields and makes each grommet equidistant from one another.

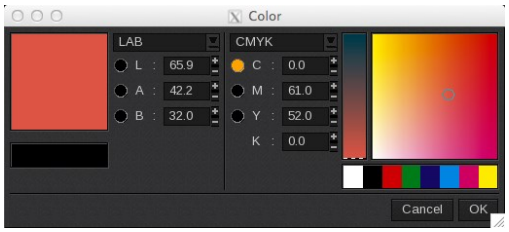
Note: The minimum selection is 2 on each axis and 4 on the ellipse.

Grommets contour

You can assign an outline and a fill to circle and square grommets:

Note: When the cut contour is enabled, the outline and fill will not be printed even though they will appear in the preview window.

- **Contour type**: lists options for the contour outline
  - **None**: no contour line is applied to the grommets
  - **Plain**: a solid line is applied to the grommets
  - **Dashed**: a dotted line is applied to the grommets
- Choose the color of the contour by clicking on the square at the end of the contour type line (the square is black by default).



- **Thickness**: defines the thickness of the contour line by entering a value into this field.
- **Fill/2nd color**: assign a fill color to **Squares** and **Circles**. By default, only the contour line of the shape is printed, the inside remains transparent. You can assign a color to fill the shape by clicking on the colored square. The fill color will appear on the printed graphic.

Add Lines

- **Lines**: select which sides of the graphic to apply the lines.
- **Line offset**: defines the distance between the line and the image border. For example, a **line offset** equal to zero will align the line to the image border. Click the ***[...]*** button to define the specific offset of each side.

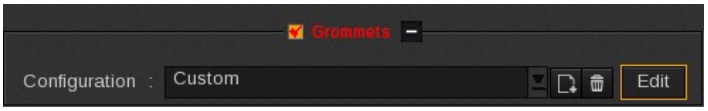
If you put a negative value, it will be ignored. The line must be inside the image or on the border of it.

- **Thickness**: defines the thickness of the line by entering a value into this field.
- **Line type**: You can assign a line type from the options below:
  - **None**: no line is applied
  - **Plain**: a solid line is applied
  - **Dashed**: a dotted line is applied

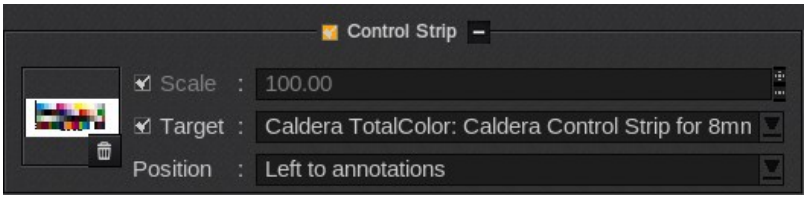
If you choose a dashed line, you can select a second color for the line's perimeter. Note, in the preview you will only see the first color you selected. However the second color will be printed correctly.

Error

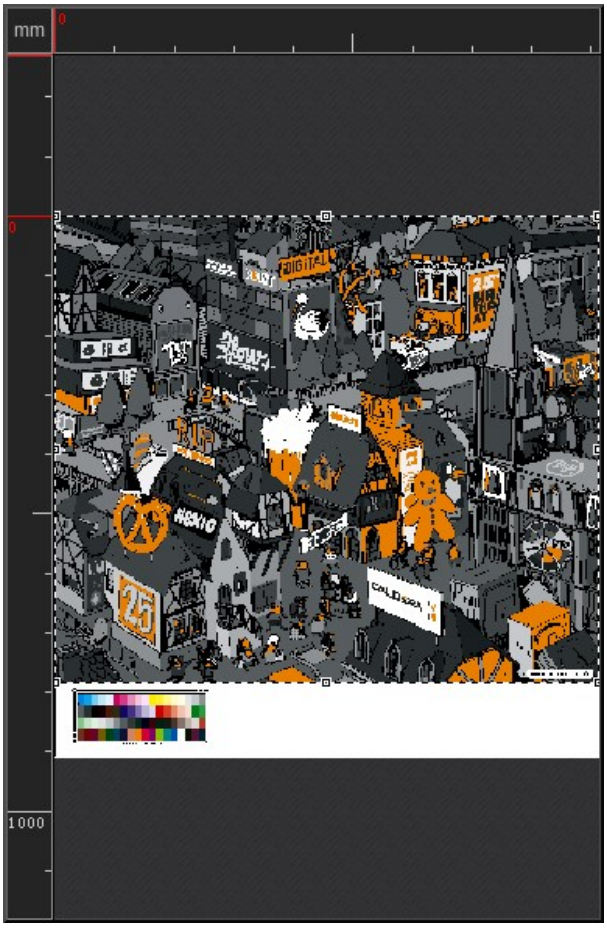
Overlapping grommets are not supported. If you define a value (e.g. size, spacing or number of grommets) that results in an overlap, the grommets header will blink red. If this occurs, you must review your parameters before sending the job to print.



Control Strip

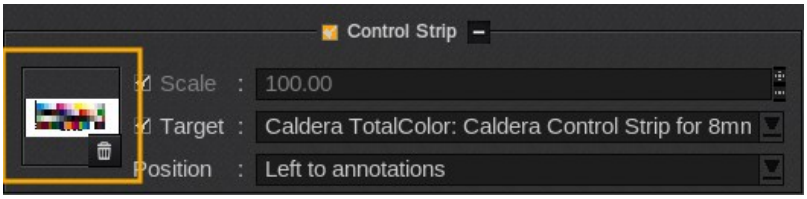


A control strip is an option to help manage the output of your printer. In the **Control Strip** area, you can add a target or a custom control strip graphic under your print.



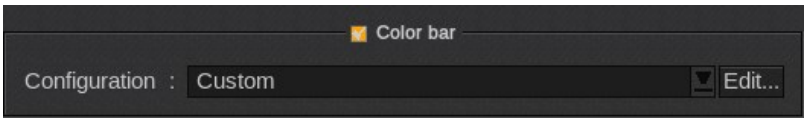
You can set the following elements:

- **Add control strip**: add a custom control strip to the bottom of your print by dragging the image from the ImageBar to the little square. To remove it, click the ***Trashcan*** icon.

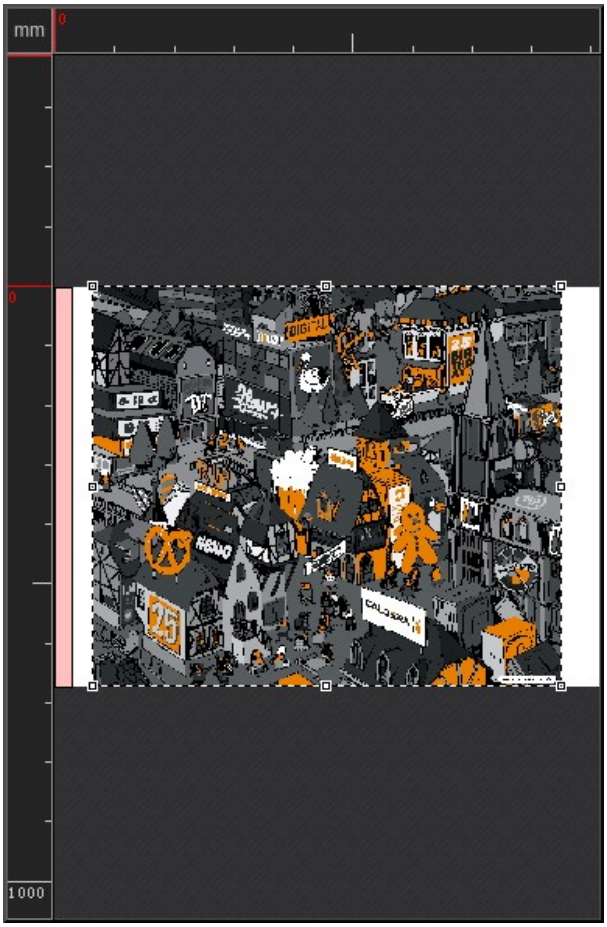


- **Scale**: defines the scale of the control strip as a percentage. Applies only to custom control strips.
- **Target**: adds a target selected from the drop-down list. If a custom control strip was added, it will be replaced by the target when the **Target** field is enabled.
- **Position**: defines where the custom control strip or target is placed on the print. Options include: *Left to annotations* or *Above the annotations*.

Color bar



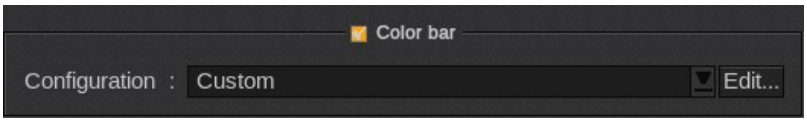
When the **Color bar** area is enabled a "Color bar" (aka “Color Stripes” or “Gutters”) is added to your print. The color bar prints multiple bands, one for each ink. The goal is to have the printer firing ink at all times to prevent abrupt density variations and the nozzle from clogging.



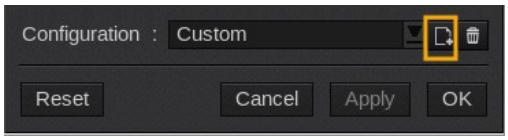
The Color bar is represented by a pink bar in the preview.

Add a configuration

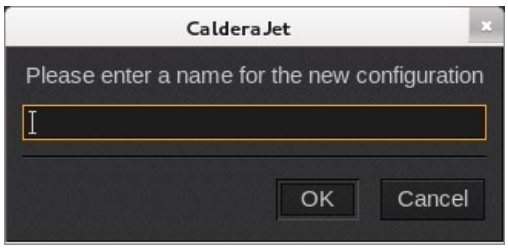
To create a new configuration, click on the ***Edit*** button.



Then click on the new icon in the ***Color bar configuration*** window



Enter a name for the new configuration and click ***OK***.

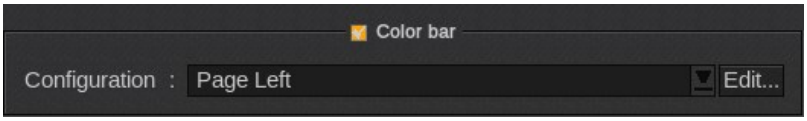


It will now appear on the color bar configuration list.

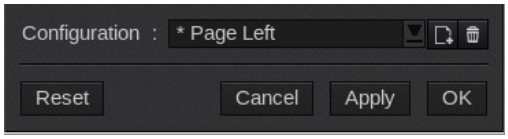
Note: Color bar configurations are shared between all the **Printer** modules.

Edit a configuration

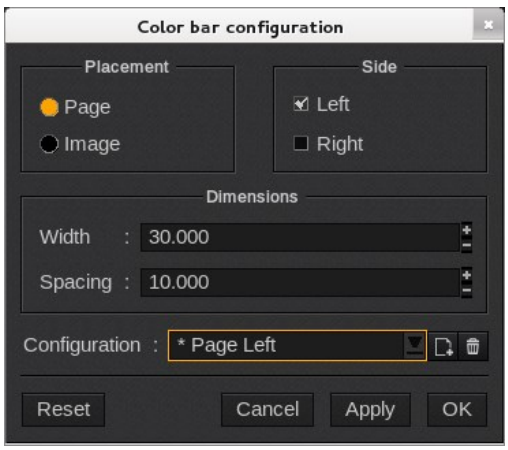
To edit a configuration, select it from the list and click ***Edit***.



As you make your changes in the *Color bar configuration* window, a star is placed ahead the configuration's name to indicate that changes have been made but not yet saved.



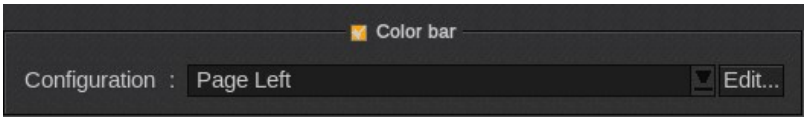
To save your changes click the new icon and then click ***OK***.



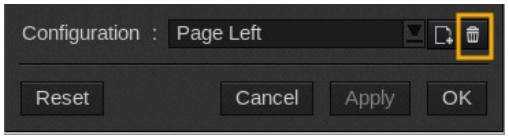
You will be prompted to confirm you want to overwrite the configuration. Click ***Yes*** to confirm.

Delete a configuration

To delete a configuration, select it from the list and click ***Edit***.

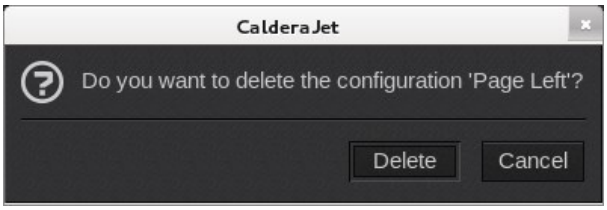


In the ***Color bar configuration*** window, select the configuration from the list and click on the ***Trashcan*** icon.

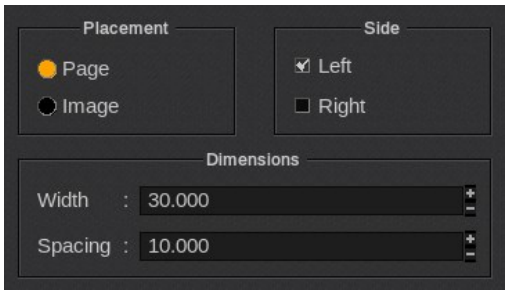


You will be prompted to confirm you want to delete the configuration. Click ***Delete*** to confirm.

You cannot delete the « Custom » configuration. However you can change its parameters.



Settings

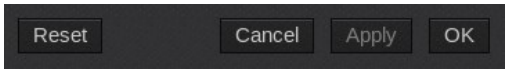


The *Color bar configuration* window displays the settings of the color bar.

- **Placement**: places the Color bar either next to the **Page** (right after the margin) or next to the **Image**.
- **Side**: places the Color bar on the **Left** or on the **Right**.
- **Dimensions**: sets the total **Width** (for all the inks) and the **Spacing** between the Color bar and the edge of the page or the image.

Actions

The **Color bar configuration** window allows the following actions.



- ***Reset***: restores the saved configuration.
- ***Cancel***: closes the window without applying the changes.

- ***Apply***: applies the changes and keep the window open.
- ***OK***: applies the changes and closes the window.

Mark Setup

The **Mark Setup** area lets you define which color will be used to print all the finishing marks such as annotations, crop marks, and cut marks. Options include:

- **Pure Black**: only the black cartridge is used.
- **Composite Black**: mixes ink to create black.
- **Custom**: allows you to select the color of your choice. A black square appears by default.
  - Click on the black square to make a selection.

  - Enter the CMYK values of the color you wish to use and click ***OK***.

Step&Repeat

The S&R tab is the third tab listed on the *Page Setup* window. The **Step&Repeat** options allow you print several copies of one image while optimizing their placement on the media.
There are three **Step&Repeat** options:

- **Standard**: uses a standard rectangular layout to optimize the placement of the copies.
- **Textile**: looks for the best drop to copy patterns.
- **Contour**: uses the cut contour lines in the graphic to optimize the placement of the copies.

Additional feature:

- **Nest as block**: when enabled, nests the copies as a block as shown in the preview window for that print job. When disabled, the copies are nested independently along with other images.

Standard Step&Repeat

Overview

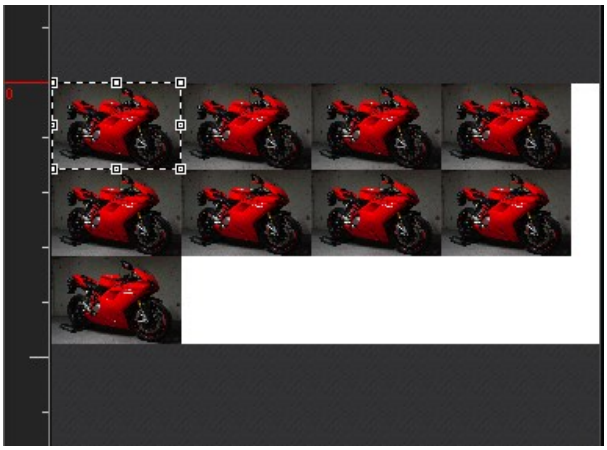
Standard Step&Repeat options include:

- **Copies and placement**: number of copies and placement on the media.
  - **Full**: all copies are nested on the same page.
  - **Auto**: typically results in one row of images printed multiple times.
  - **Manual**: manually specify number of copies per page and number of pages to print.
  - **Page**: fills the current page with the maximum number of copies possible.
- **Margins**: margins between each copy.
- **Make separated rows**: when enabled separates copies into straight rows creating a white space to make cutting each row easier.

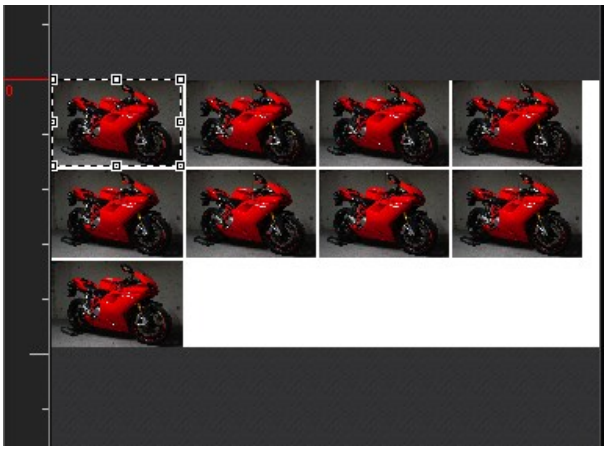
Note: Changes applied are dynamic and are immediately displayed in the preview section.

Margins

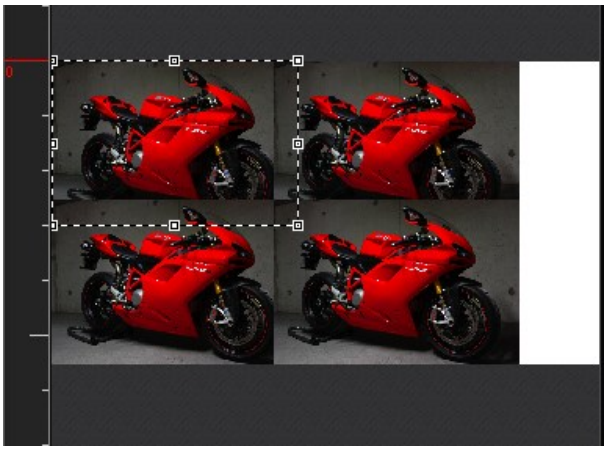
The **Margins** tool adds a margin or space around each copy. The margin is placed between copies on the same row and between each row, if applicable. The unit of measurement for the margins is defined in the page configuration tools. Below are three examples of how the margins tool can be utilized.



NO MARGIN: no margin or space is applied between each copy.



POSITIVE MARGIN: a margin or space is added between each copy and between each row.



NEGATIVE MARGIN: an overlap is applied to each copy. The right copy goes above the left one and the bottom copy goes above the one on top.

Make separate rows

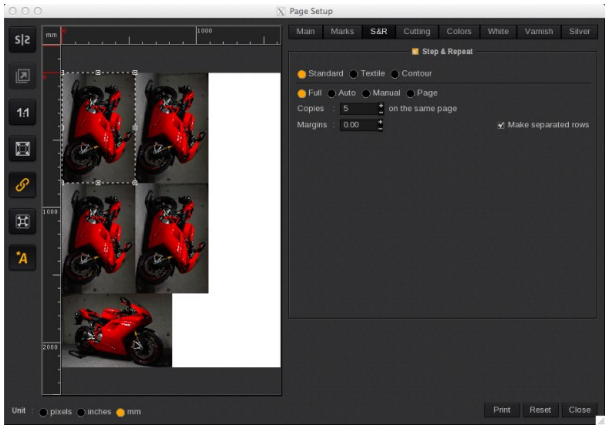
When **Standard Step&Repeat** is enabled the option **make separate rows** is available. This option organizes the copies by rows where each row forces each copy to have the same orientation.

This option makes cutting each row easier with a trimmer or cutter.

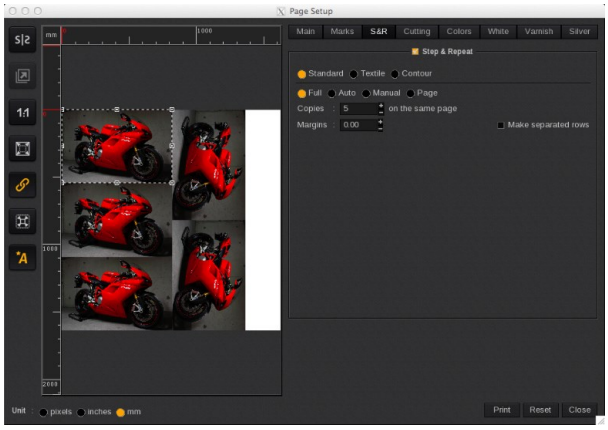
The **make separate rows** option is not useful in **Auto** mode when the page format is set to roll. In this case, copies are automatically organized by rows.

The option is also not as useful when the image orientation mode is fixed. Only the image automatic orientation option allows copies to have different orientations in order to optimize space on the media.

Image automatic orientation option.

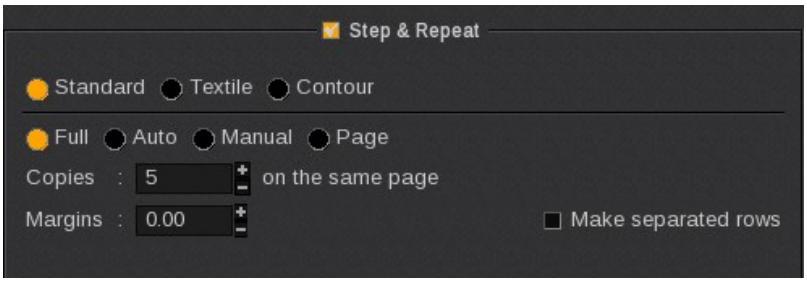


Make separate row is **activated**. For each row, only one image orientation is allowed.



Make separate row is **deactivated**. The layout is optimized to reduce media waste.

Full mode



As mentioned when **Standard** Step&Repeat is selected there are four copy placement options available: **Full**, **Auto**, **Manual**, and **Page**.

The **Full** mode puts all copies **on the same page** and doesn't allow for more copies than what the page allows. This option does not create more pages if the number of copies entered exceeds the maximum number of copies permitted on the page.

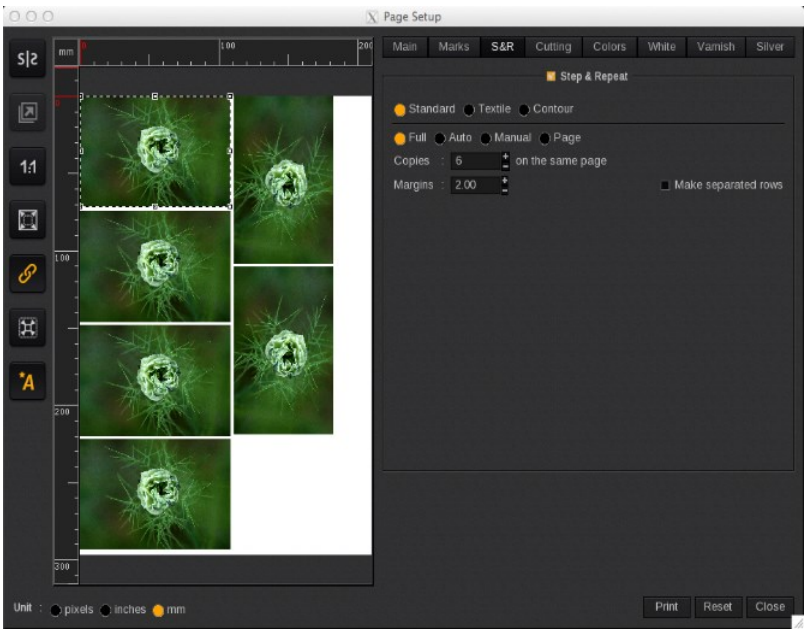
If the page format is a sheet (e.g. A4), the maximum number of copies in the print job will depend on the following:

- The image size (and the maximum number of copies that can be placed on the sheet with that size)
- The image orientation
- The make separate rows option (if enabled or disabled)
- The margins applied

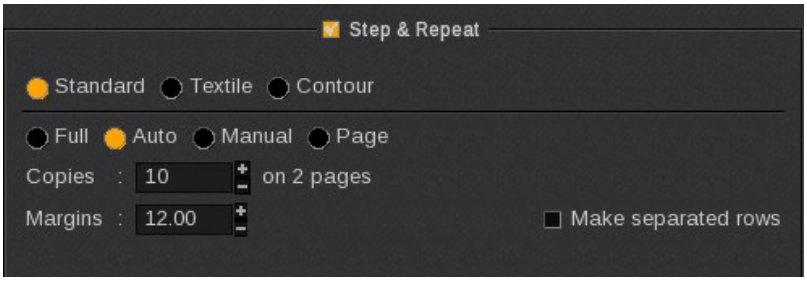
If a greater number is entered into the **Copies** field than what the page allows, it will automatically revert back to the maximum number of copies that can fit on the page.

Note: In **Full** mode, the maximum number of copies is restricted to 1000.

In the example below there are 6 copies on 1 page. This will result in 1 print job in the **Spooler**, and it will be printed once (1 copy).

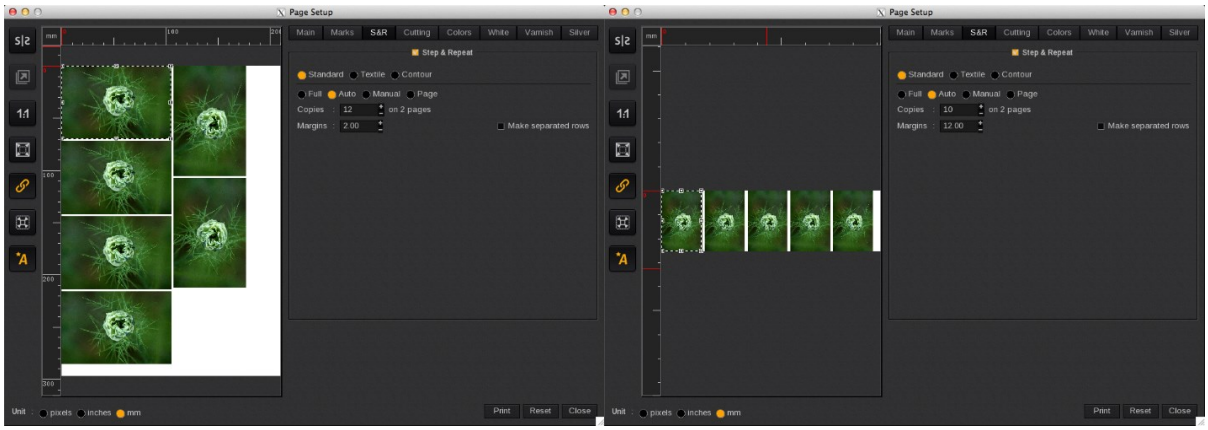


Auto mode



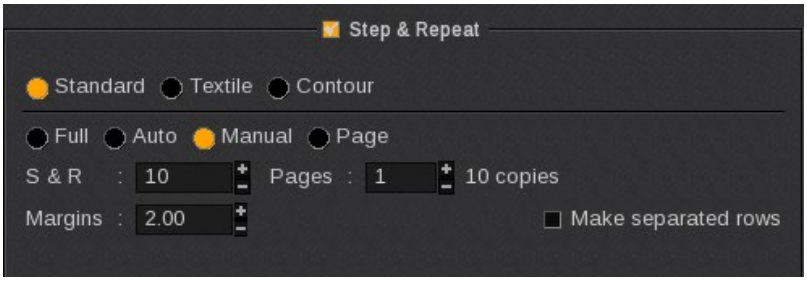
The **Auto** mode option combines multipage and image placement optimization in one.
When the number of copies desired exceeds the number of copies the page allows, the page is duplicated. The number of copies will automatically be doubled and no intermediate number of copies can be entered.
In roll mode, a “page” corresponds to one row. So even in roll mode a maximum copy number per page exists.

In the example below there are 10 copies on 2 pages. This will result in 1 print job in the **Spooler**, and it will be printed twice (2 copies).

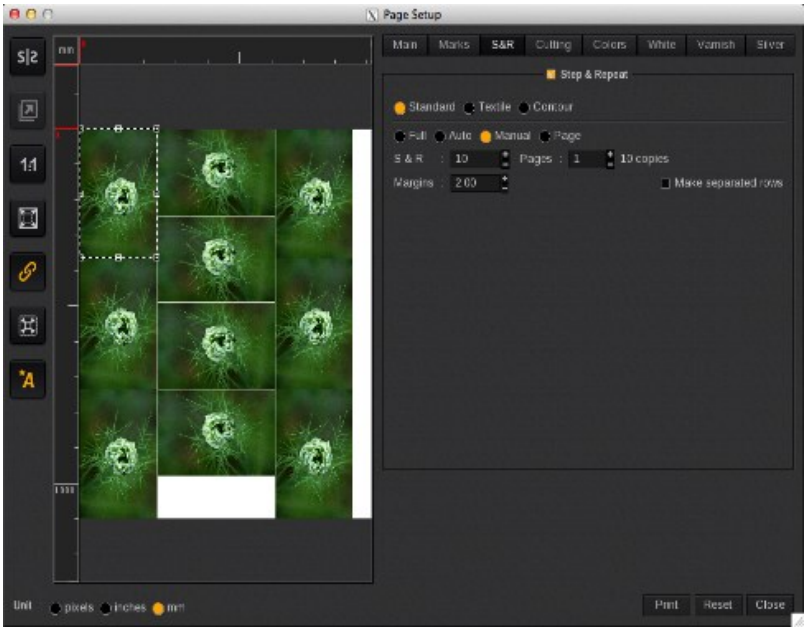


Presentation in sheet (A4) and roll format.

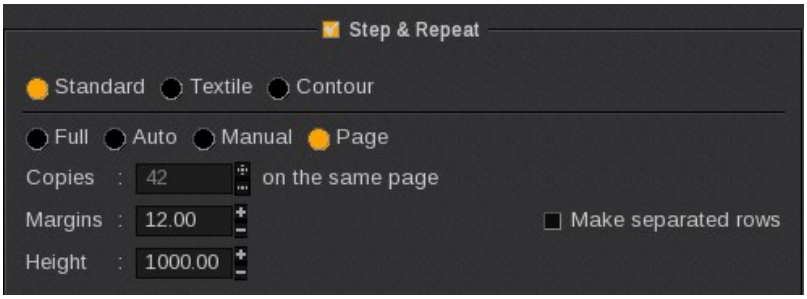
Manual mode



The **Manual** mode option allows you to specify the number of copies per page and the number of pages. You can place all copies on the same page if they fit or use the multipage option. Each page is a duplicate of the first page.
In the example below there are 10 copies on 1 pages. This will result in 1 print job in the **Spooler**, and it will be printed twice (1 copy).



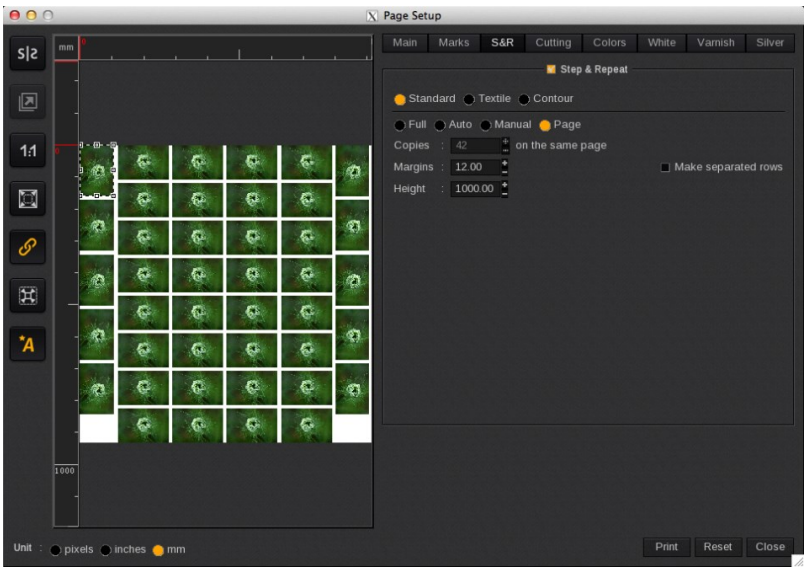
Page mode



The options in **Page** mode are determined by the media type selected:

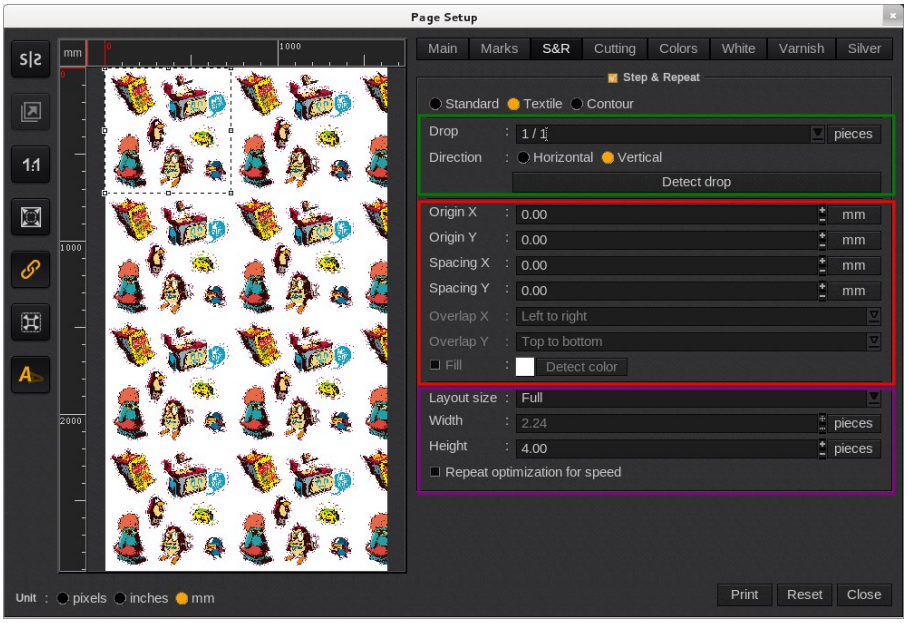
- *Sheet*: fills the sheet with the maximum number of copies (similar to **Full** mode but without the ability to choose the number of copies and to duplicate the sheet).
- *Roll*: specifies a **height** to get a "page size" and then fills the page with the maximum number of copies.

In the example below there are 42 copies on 1 page. This will result in 1 print job in the **Spooler**, and it will be printed once (1 copy).



Tex&Repeat

Tex&Repeat is an option. Its use may require the purchase of a specific key, depending on your RIP package.



The window can be divided in three parts:

- The **drop**.
- The **repetitions page setup.**
- The **document size.**

The preview is dynamic and allows to see real time changes made on the page configuration.

Tex&Repeat does not allow to choose an automatic image orientation because the drop depends on the orientation so it cannot vary from one repetition to the other. By default, the original orientation is chosen.

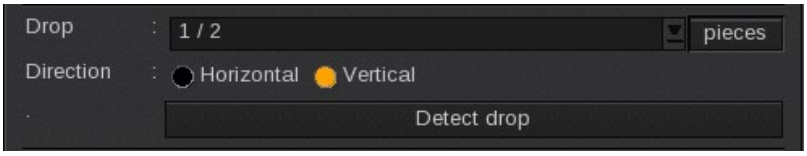
The drop

What's the drop?

In textile printing, the image repetition side by side is not used because it creates a symmetric effect that is visually unpleasant. To avoid this, images are created to be reproduced with a **drop**.

The **drop** is either a distance or a fraction. For example a 1/3 vertical **drop** means that the next repetition will be placed right to the previous pattern with a drop of a third down.

Drop setup



Using the ***Detect drop*** button, **Tex&Repeat** is able to automatically detect the image drop.

Be careful, using the detect drop button with wide images containing a large amount of pixels may take a longer processing time (up to several minutes).

This button is efficient in most cases whereas the drop can be set up manually. In this case the user will have to specify the followings:

- **Drop**: the drop can be indicated in number of pieces or in distance (either in pixels, inches or millimeters depending on the unit chosen for the page configuration tools).

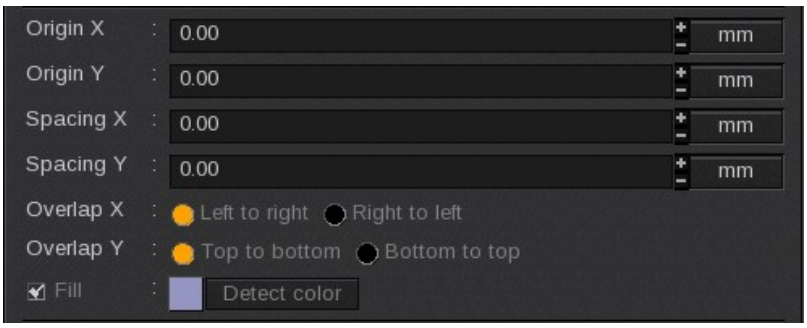
  When the drop is defined in pieces, it can be either under a fraction or a value shape.

- **Direction**: the direction either **horizontal** or **vertical** indicates the plan according which the drop will be done. (See examples).
  - **Vertical**: repetitions are normally placed in columns. The repetition placed on the same line, is moved to the back with the drop size.
  - **Horizontal**: repetitions are normally placed in lines. The repetition placed on the same column, is moved to the right with the drop size.

Drop examples

No drop | 1/2 vertical drop | 1/2 horizontal drop | 1/3 vertical drop | 1/3 horizontal drop

Page setup



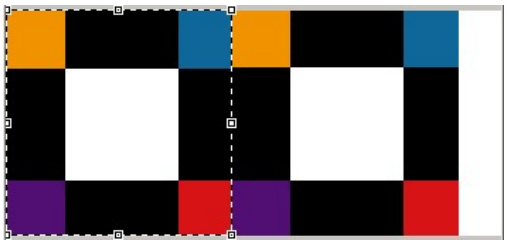
The page setup allows to move forward the image origin and to define spacing and overlap procedures.

Image origin

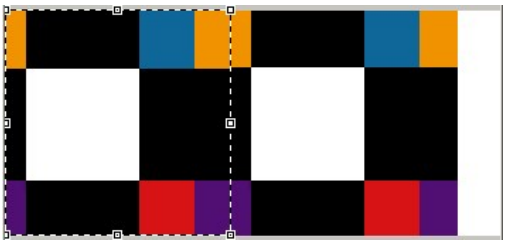
The image origin can be moved forward on the page. This move is indicated in number of pieces or in distance (either in pixels, inches or millimeters depending on the unit chosen for the page configuration tools). By default, origins are fixed at 0.00.

The origin has to be chosen between -1 and 1 piece. It is recommended not to use a negative origin. A 1 X and 1 Y origin displays the image as if no move has been made.

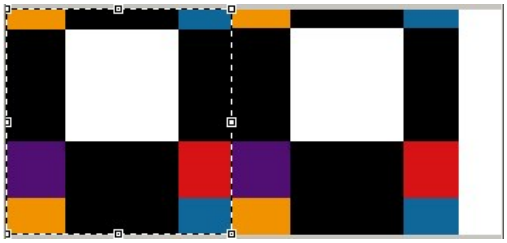
Origin move examples. The image **drop** is 1/1. On the original place, the white square is center.



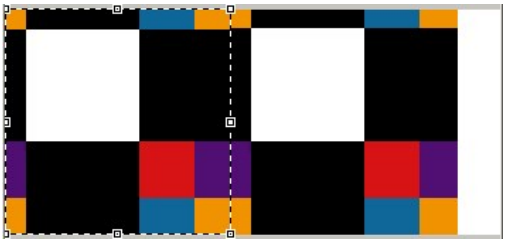
Original position



X origin moved (+70mm). Copies are impacted at the right of the line.



Y origin moved (+70mm).



X and Y origins moved (+70mm).

Spacing

In Spacing fields, numbers can either be positive or negative. When positive, a space appears between the copies that can be filled. When negative, an overlap is created.
By default, no spacing is specified.

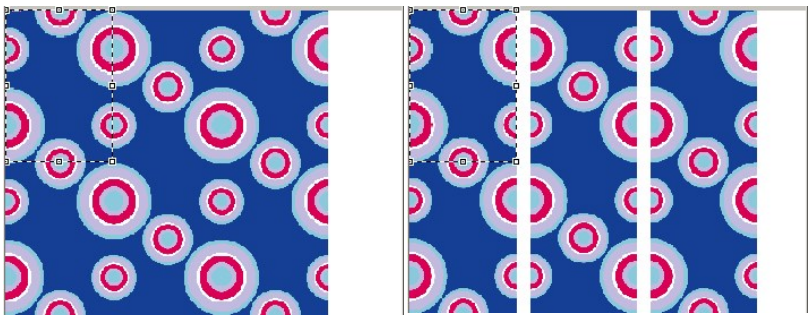
Be careful, the piece size calculation takes the spacing into account. A piece is the image size + the spacing.

The piece size has influence on the drop calculation and the size of the document.

Filling

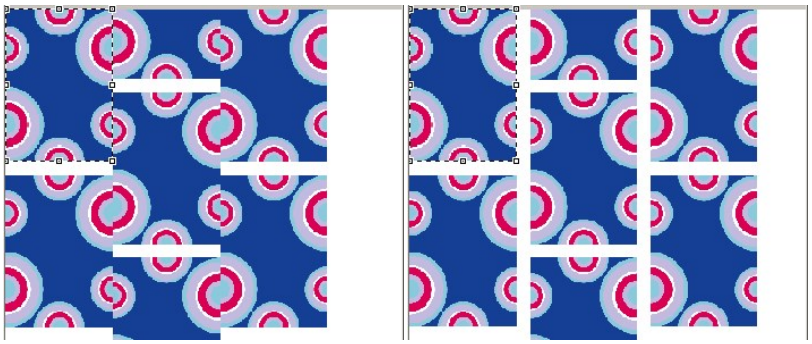
A positive spacing moves the repetition right (X) and down (Y) creating some space between the copies.

Positive spacing examples:



Original position

X spacing (+30mm).



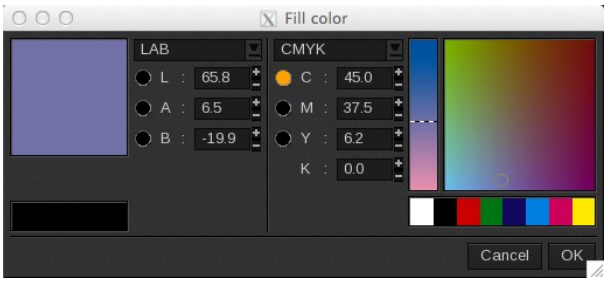
Y spacing (+30mm).

X and Y spacing (+30mm).

By default, the space generated is considered as an unprinted area. It is possible to fill this space with color.

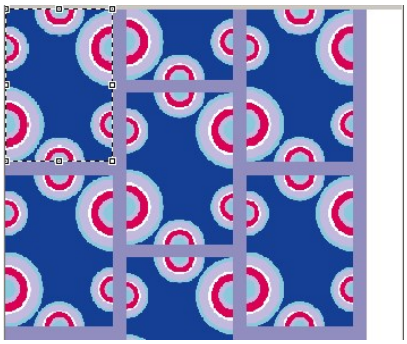
To fill the space, the box has to be checked:

Clicking on the colored square opens the following pop-up to change the color:



The color modes available are: LAB, HSV, XYZ or CMJN, RVB and Grey.

The ***Detect color*** button allows the user to let the system choose the proper color to fill in. The image border color will be detected and applied or, if the image has multiple border colors, an average value will be calculated.



The color used to fill the space has been calculated with the detection color button.

Overlap

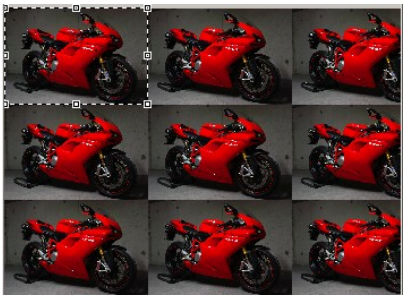
A negative spacing moves the repetition left (X) and up (Y) creating an overlap between copies.
The overlap principle can be defined according to:

- The X axis:
  - Left to right: the left copy is over the right one.
  - Right to left: the right copy is over the left one.
- The Y axis:
  - Top to bottom: the top copy is over the bottom one.
  - Bottom to top: the bottom copy is over the top one.

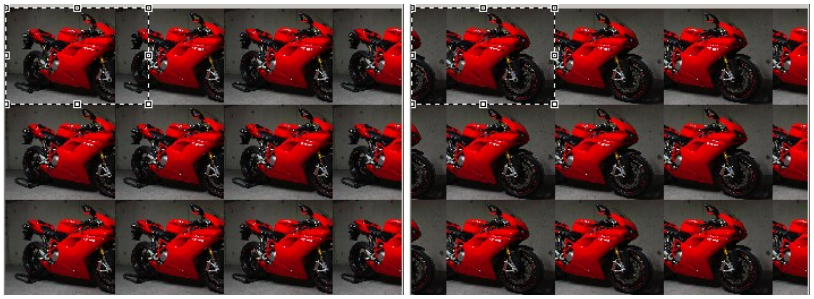
When there is an overlap on the X axis and on the Y axis, the X axis makes its move first then the Y does (see last example).

Overlap examples:
The chosen image is not relevant for textile printing. This choice has been made to have a better vision of the overlaps.

Original position

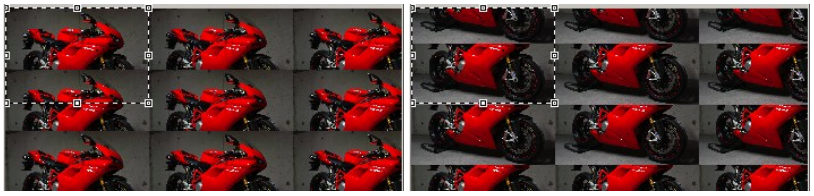


X spacing (-80 mm).



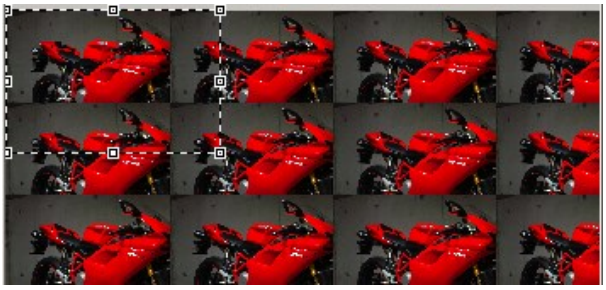
Left to right | Right to left

Y spacing (-80 mm).



Top to bottom | Bottom to top

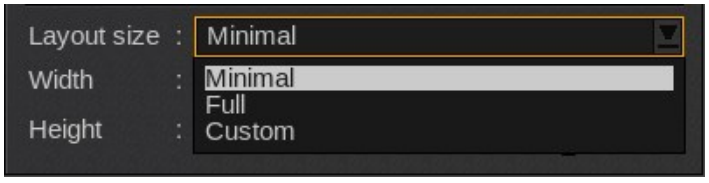
X and Y spacing (-80 mm).



Left to right and top to bottom.

Document size

In this set-up window users can define the document size, which can be: **Minimal, Full** or **Custom**.



Minimal

This mode creates the image's pattern. It is the smallest motif of the original image which can be reproduced with a 1/1 drop.
The pattern size cannot be changed. It depends on the drop and the direction.

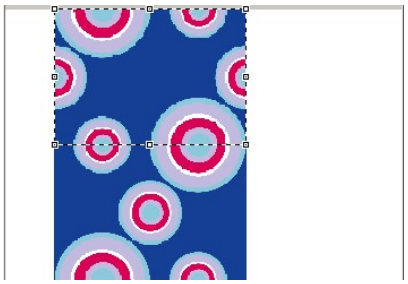
The size is automatic so the width and height fields cannot be changed.

For the size calculation: if the drop is represented as a x/n fraction so:

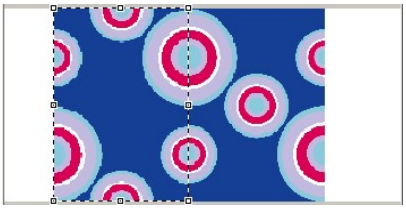
- If the direction is **vertical**: n repeats of the image will be placed on 1 **line** (using the drop).
- If the direction is **horizontal**: n repeats of the image will be placed on 1 **column** (using the drop).

Be careful, the number of repeats can be limited depending on the page format.

Examples:



1/2 vertical pattern.



1/2 horizontal pattern. (To realize this horizontal example we simply changed the image orientation.)

Full

This mode covers the page completely by placing the proper number of copies.
When the page format is roll type, the height is specified by the user. If not, none of the **Width** and **Height** fields can be changed.

When available, the **height** can be specified in number of pieces or in units of distance.

Examples:

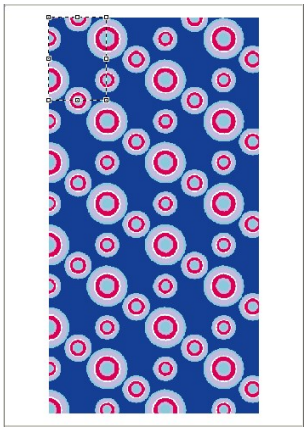
A4 filled with the Full mode

Custom

This mode allows the user to indicate manually the number of copies in width and height to put on the page.

The page format limits the number of copies. If it is a sheet, width and height will be limited whereas only the width will be limited in roll mode.

Examples:



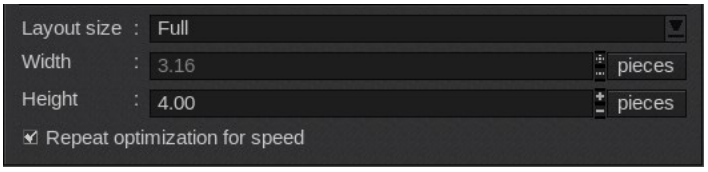
Page format: A4, the screenshot dimensions are used.

Repetitions are placed in the center of the page on purpose to show that the user is free to do as he wants.

Repeat optimization for speed

This option is available only for file-based printer drivers.

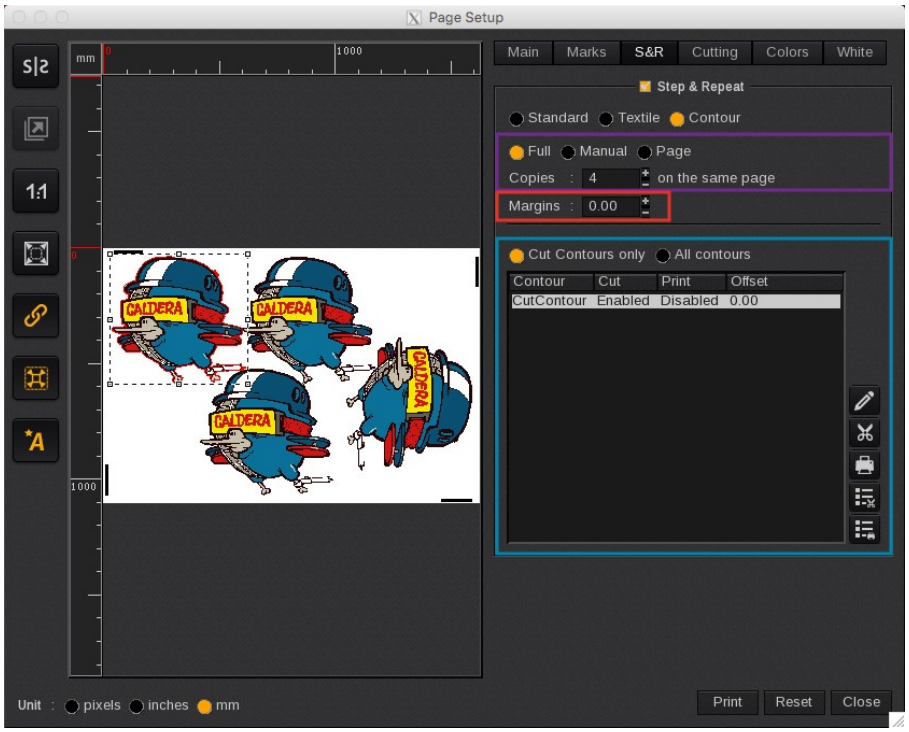
It increases the speed of Tex&Repeat jobs but disables the use of Annotations, Color bars and QR Codes.



ContourNesting Step&Repeat

The ContourNesting Step&Repeat feature optimizes copy placement on the media by using the cut contour line in the graphic. When **Contour** mode is selected, the cutline in the graphic is automatically enabled.

Overview



Contour Step&Repeat options include:

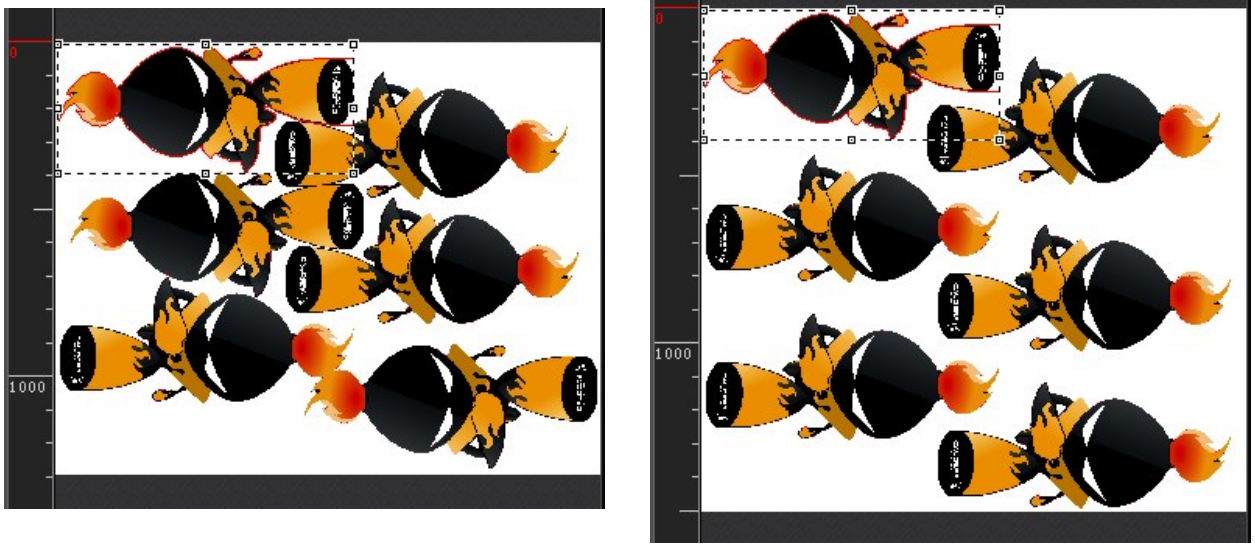
- **Copies placement mode choice**: number of copies and placement on the media.
  - **Full**: all copies are nested on the same page.
  - **Manual**: manually specify number of copies per page and number of pages to print.
  - **Page**: fills the current page with the maximum number of copies possible.
- **Margins**: margins between each copy.
- **Cut Contour Management**: manages the cut contour lines in the graphic.

Note: Changes applied are dynamic and are immediately displayed in the preview section.

Margins

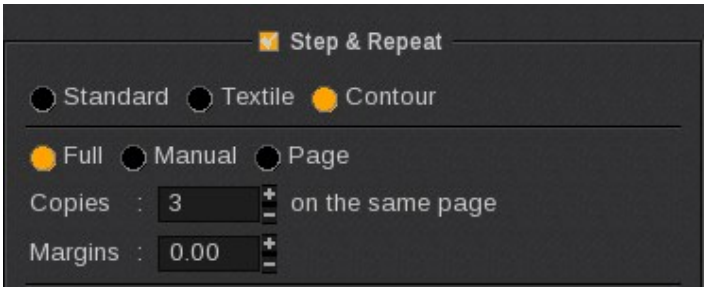
The **Margins** tool adds a margin or space around each copy. The margin is placed between copies on the same row and between each row, if applicable. The unit of measurement for the margins is defined in the page configuration tools. Below are two examples of how the margins tool can be utilized.

Note: negative margins are not allowed.



NO MARGIN: no margin or space is applied between each copy. POSITIVE MARGIN: a margin or some space is added between each copy.

Full mode



As mentioned when **Contour Step&Repeat** is selected there are three copy placement options available: **Full**, **Manual** and **Page**.

The **Full** mode puts all copies **on the same page** and doesn't allow for more copies than what the page allows. This option does not create more pages if the number of copies entered exceeds the maximum number of copies permitted on the page.

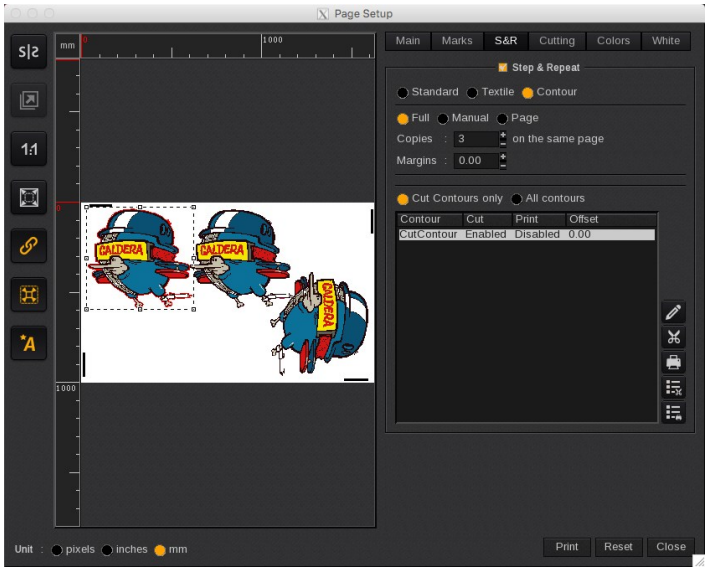
If the page format is a sheet (e.g. A4), the maximum number of copies in the print job will depend on the following:

- The image size (and the maximum number of copies that can be placed on the sheet with that size)
- The image's orientation
- The make separate rows option (if enabled or disabled)
- The margins applied

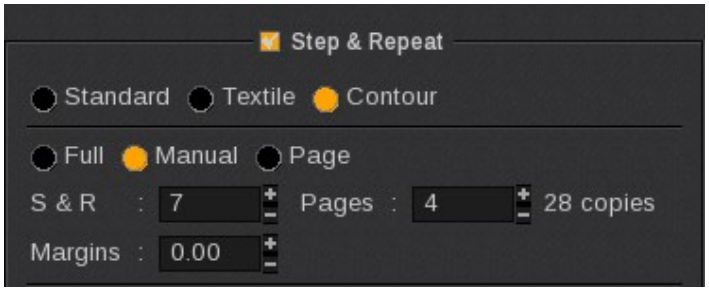
If a greater number is entered into the **Copies** field than what the page allows, it will automatically revert back to the maximum number of copies that can fit on the page.

Note: In **Full** mode, the maximum number of copies is restricted to 1000.

In the example below there are 3 copies on 1 page. This will result in 1 print job in the **Spooler**, and it will be printed once (1 copy).

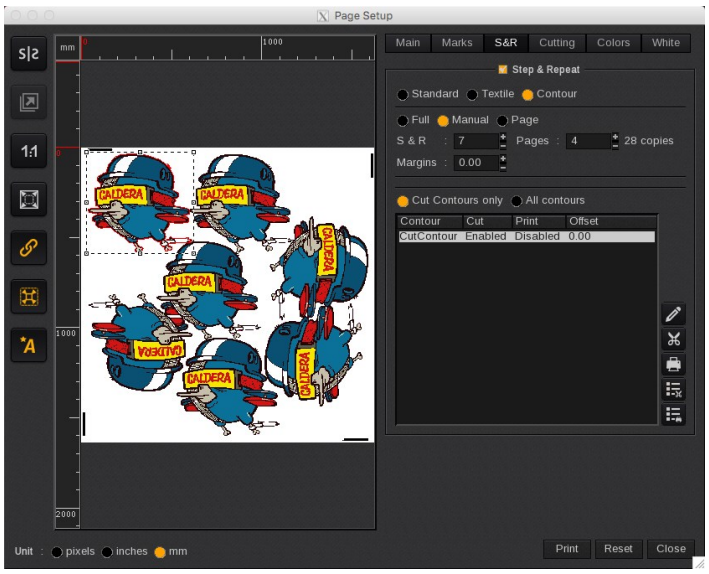


Manual mode

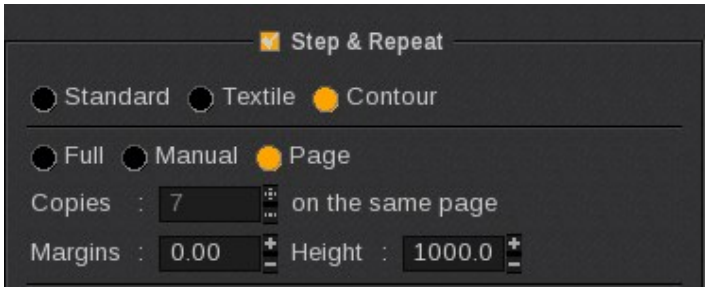


The **Manual** mode option allows you to specify the number of copies per pages and the number of pages. You can place all copies on the same page if they fit, or use the multipage option. Each page is a duplicate of the first page.

In the example below there are 7 copies on 4 pages. This will result in 1 print job in the **Spooler**, and it will be printed four times (4 copies).



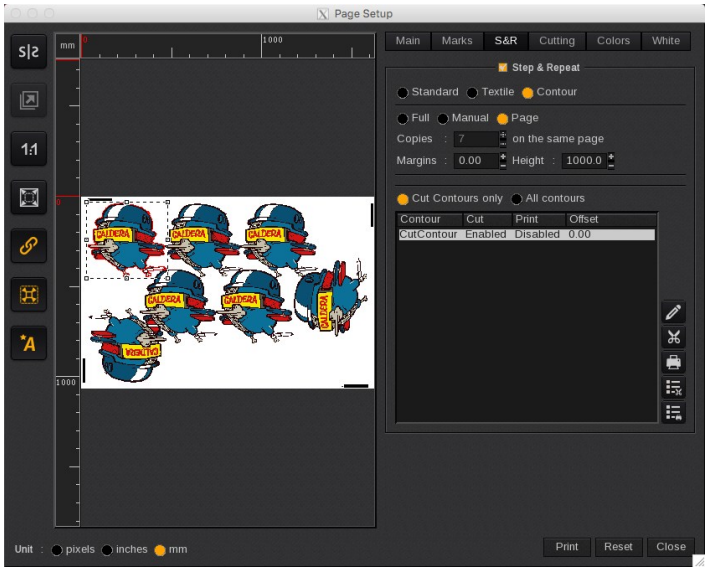
Page mode



The **Page** mode options are determined by the media type selected:

- *Sheet*: fills the sheet with the maximum number of copies (similar to the **Full** mode but without the ability to choose the number of copies and to duplicate the sheet).
- *Roll*: specifies a **height** to get a "page size" and then fills the page with the maximum number of copies.

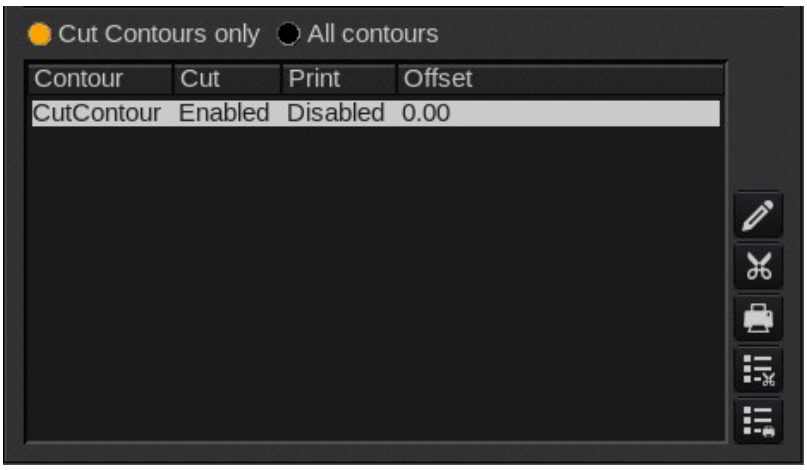
In the example below there are 7 copies on 1 page. This will result in 1 print job in the **Spooler**, and it will be printed once (1 copy).



Cut contour management

When **ContourNesting Step&Repeat** is enabled, you can manage the cut contour lines from the S&R tab. Changes applied to the S&R tab are automatically reflected in the Cutting tab and vice versa.

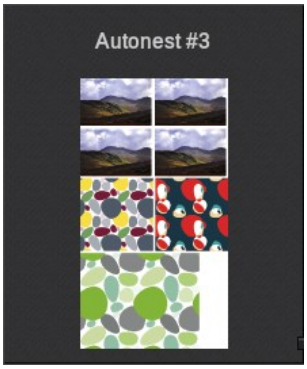
Please note that only contours that are enabled for the cut are taken into account for **ContourNesting Step&Repeat**.



Step&Repeat Nest as block

The **Nest as block** option when enabled, nests the copies as a block so other images being nested won't be mixed into the block. When disabled, the copies are nested independently and other images being nested may be mixed into the nested print job.

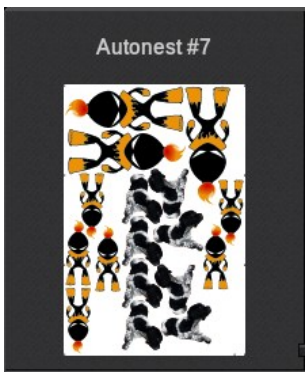
Nest as block is an option. Its use may require the purchase of a specific key, depending on your RIP package.



Example of blocks made with **Tex&Repeat** and **Standard Step&Repeat** and nested with **Nest-O-Matik**.

Example of blocks made with **Tex&Repeat** to create a textile swatch book.

Note: Several **Autonests** will not be created in the **Spooler** as long as you keep the same print parameters while sending images to **Nest-O-Matik**.

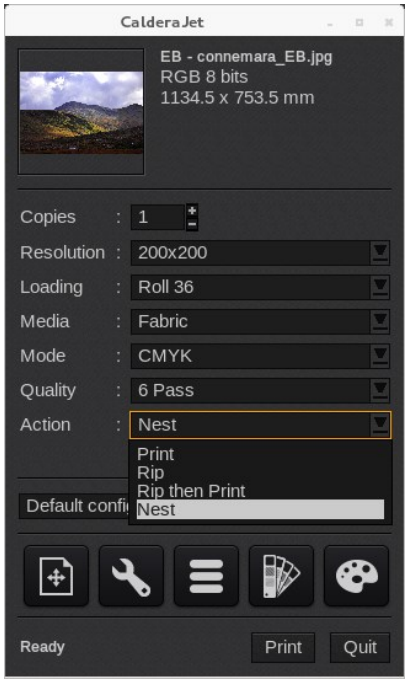


On this example, the dogs are nest as a block whereas the FlameBoys which have several sizes, are nested separately.

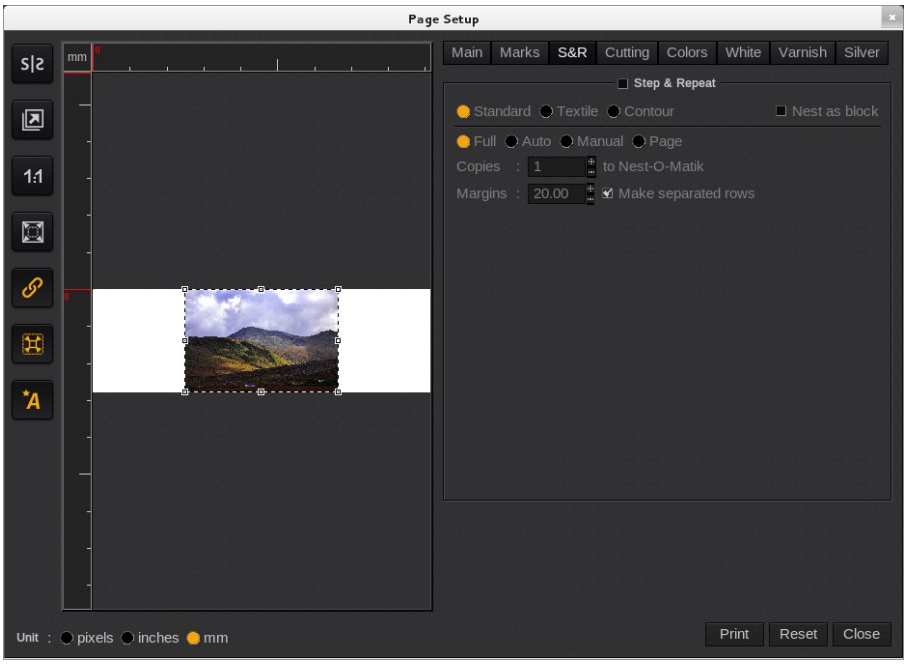
Step&Repeat Nesting Workflow

Below are detailed steps describing the **Nest as a block** workflow.

1. Open your **Print** module and add your first image.
2. From the **Action** drop-down menu, select **Nest**.

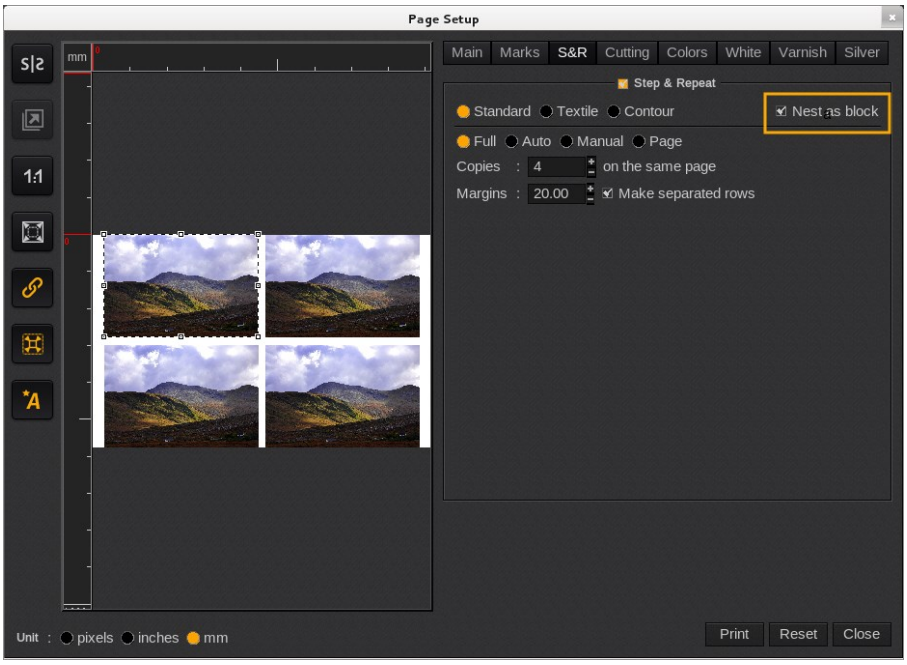


3. Open the *Page Setup* and go to the S&R tab.

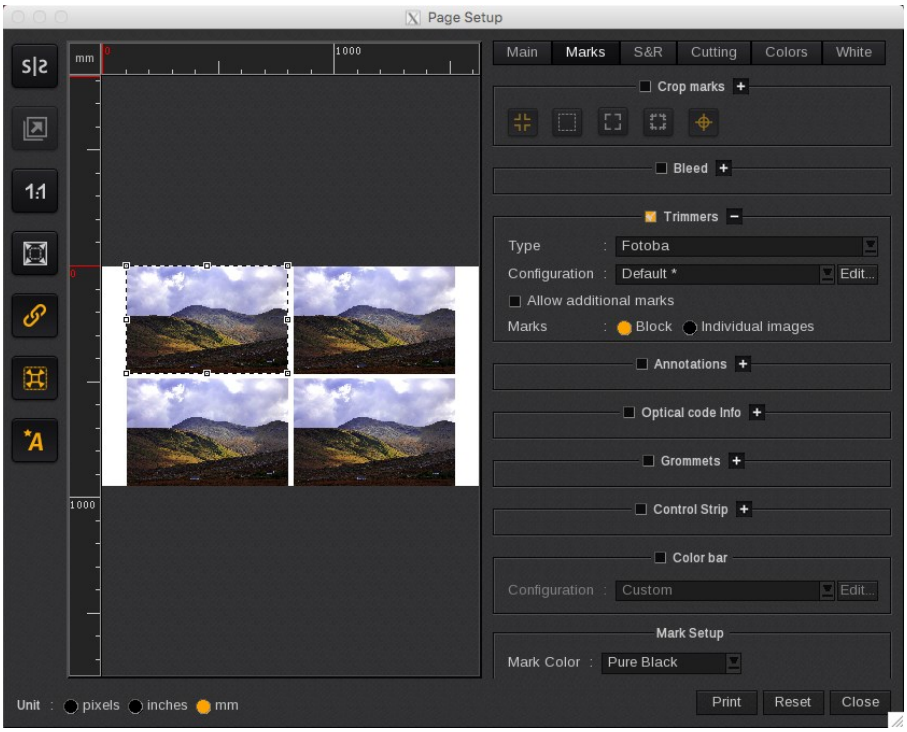


4. Select the type of **Step&Repeat** you want to use: **Standard**, **Textile** or **Contour**.
5. You can see the new option at the top right of the window. It is called: **Nest as block**.

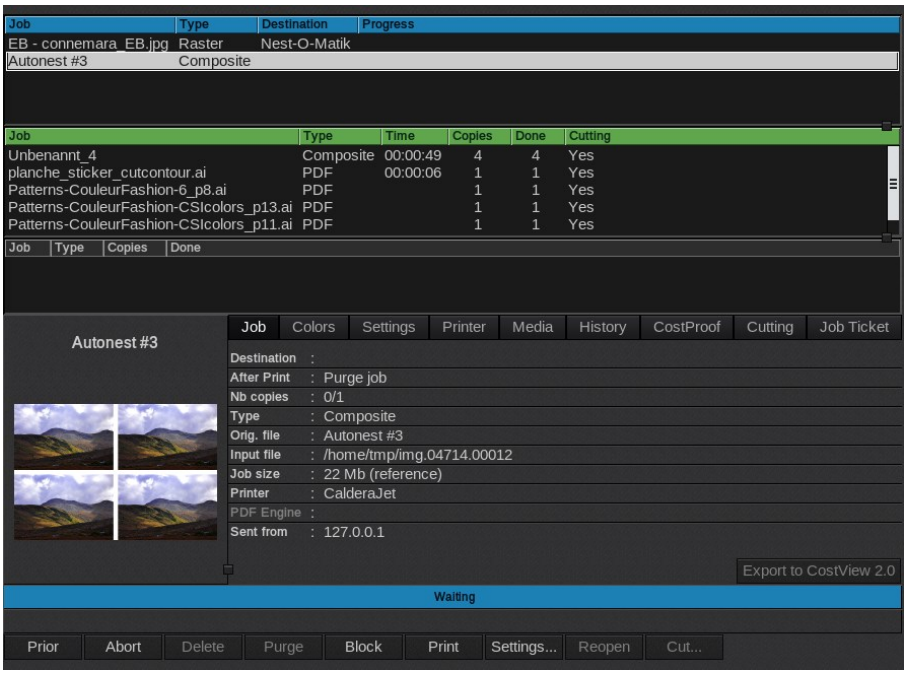
6. Enable the **Nest as block** feature.



7. Set your **Step&Repeat** and print parameters accordingly.
8. If you use a **Trimmer** (*Kala*, *Fotoba* or *Crest*), you can see that a new field appears only when **Step&Repeat Nesting** is activated. This field is **Marks** and allows you to choose if you want to put cutting marks around the **Block** only or to consider every image of the block as **Individual Images**.

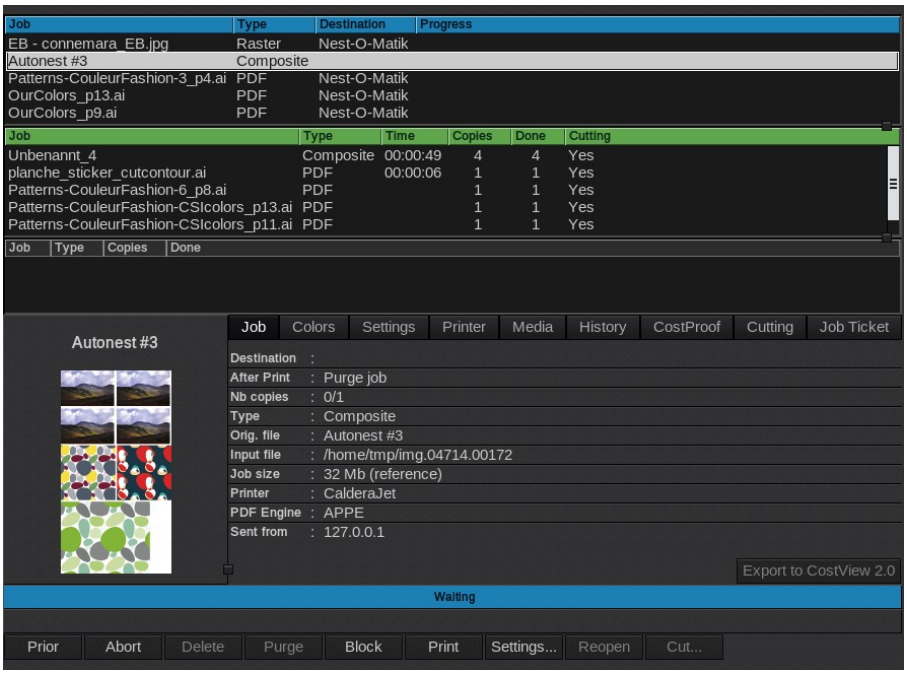


9. When finished, click ***Print***. Your block of images will then be sent to the **Spooler** and put into an **Autonest** task.



10. Then drag and drop your next image directly into the *Page Setup* window and start over at step 3.
11. Continue until you have finished nesting all of the blocks and images you want to print. Then send the job to print from the **Spooler**.

Note: Your print may also start automatically when the conditions you defined in the **Spooler** settings are reached (e.g. maximum size reached).

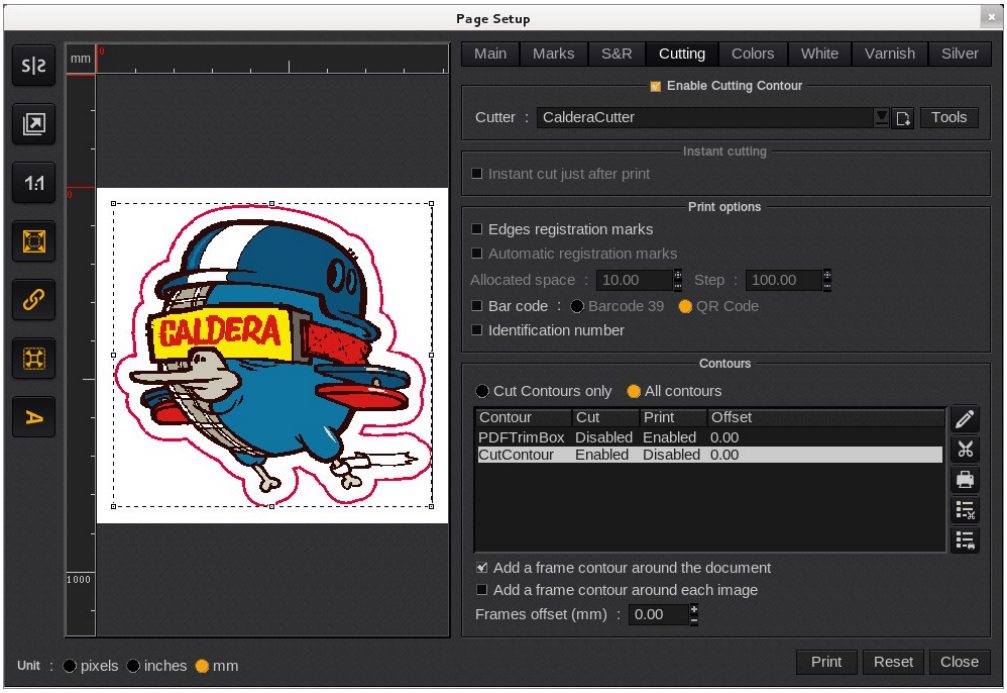


Cutting

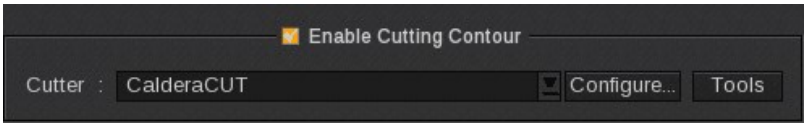
The Cutting tab is the fourth tab listed on the *Page Setup* window. The Cutting tab allows you to manage your cuts and cutlines in your graphic. The Cutting tab is divided into four areas: **Enable Cutting Contour**, **Instant cutting**, **Print options**, and **Contours**.

VisualCut is an option. Its use may require the purchase of a specific key, depending on your RIP package.

GrandCut is an option. Its use may require the purchase of a specific key, depending on your RIP package.

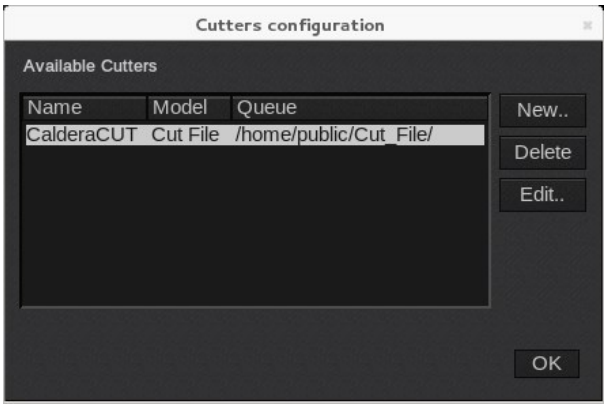


Enable Cutting Contour

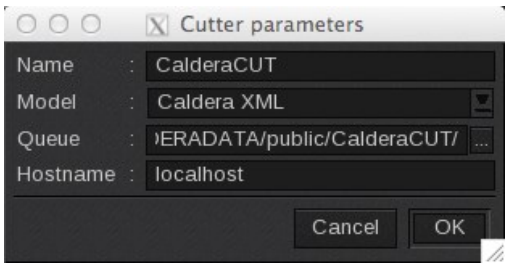


The **Enable Cutting Contour** area is where you enable the cutting features and where you select your cutter driver. Check the box next to **Enable Cutting Contour** to activate the cut features.

- **Cutter**: selects your desired cutter driver. Use the arrow to display the list of available cutter drivers.
- ***Configure***: opens the *Cutters configuration* window.



The ***new*** and ***edit...*** buttons open the cutter parameters window and the ***delete*** button removes the cutter from the list.



These fields have to be filled to add a cutter:

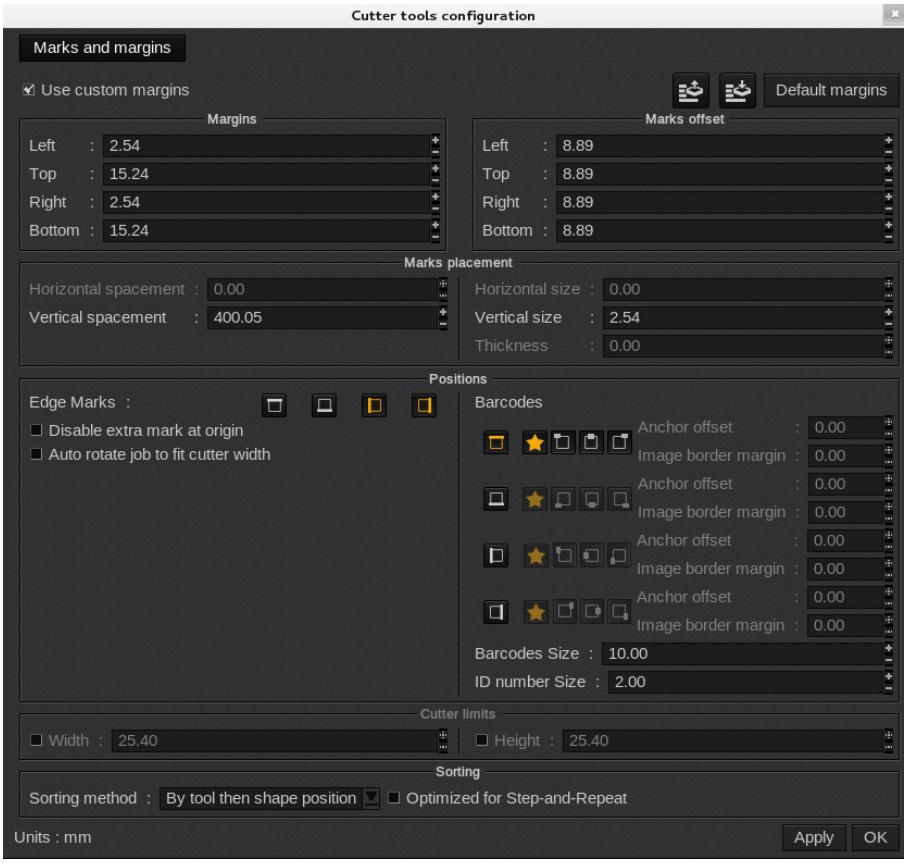
- **Name**: as it will appear in the cutter list.
- Choice of the **Model** among those supported by Caldera RIP. (The arrow displays the list.)
- **Queue**: display of the path to the directory where the cut files will be created.

When a document is processed through the **VisualCut** workflow, a cut job is generated at the end of the print process and sent to a local cutter queue. Each installed cutter has its own cut job queue, available in the corresponding CUT module.

- **Hostname**: the cutter address or network name used on the network to recognize the machine (IP address or localhost for example).

- ***Tools***: opens the *Cutter tools configuration* window that can vary by cutter model.

Tools

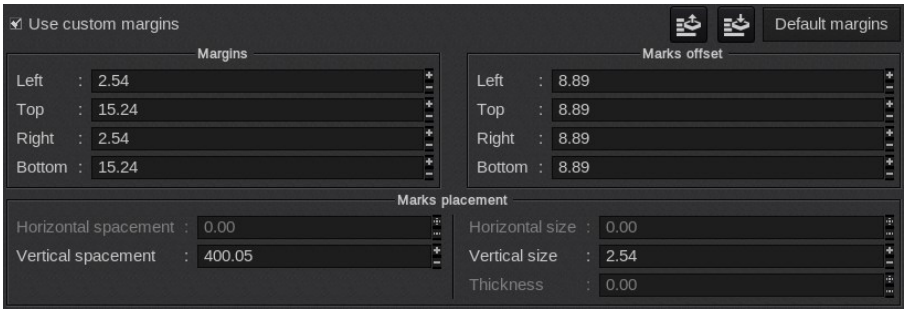


The *Cutter tools configuration* window allows you to manage advanced features for marks and margins. The *Cutter tools configuration* window is divided into four main areas: **Use custom margins**, **Positions**, **Cutter limits** and **Sorting**.
When the feature **Use custom margins** is enabled, the options are divided into three areas: **Margins**, **Marks offset**, and **Marks placement**. Click the ***Default margins*** button to reset the margins to the default values.
These two buttons allow you to :

 Save your cutter configuration.

Launch a saved configuration.

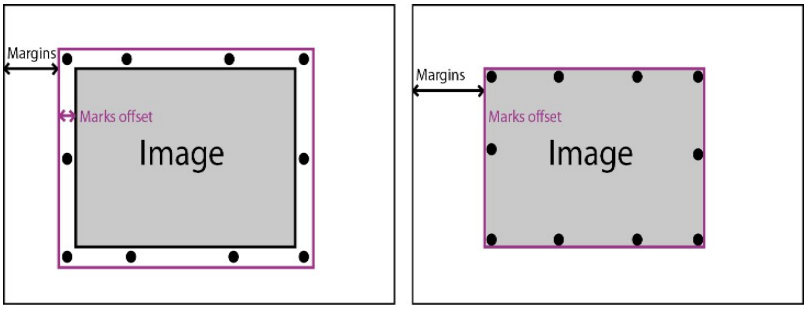
Margins



You can set **Left**, **Top**, **Right** and **Bottom** margins.

Marks offset

The **Marks offset** allows you to define the space around the image that will contain the cutting marks. In **GrandCut**, if you define the **Left**, **Top**, **Right** and **Bottom** margins at 0, the marks will be placed inside the image.
Here you can set the margins between the frame created by the **Marks offset** and the roll or page border. You can set **Left**, **Top**, **Right** and **Bottom** margins.



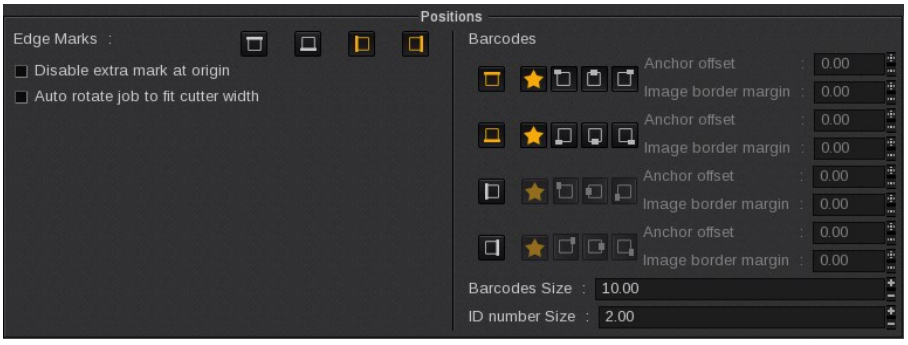
In the second example, the Marks offset is equal to 0 and the marks are placed on the image.

Marks placement

When available, you can set the **Horizontal** and **Vertical** spacing between the marks.

Horizontal and **Vertical** size and **Thickness** are fields dedicated to **VisualCut** cutters.

Positions



Here you can set the positions of the **Edge Marks** and the **Barcodes**.

Edge marks

The **Edge Marks** parameter allows you to select on which side of the job these marks will be added.

Top Bottom Left Right

When the icon is orange, it means that the side is selected.
For some cutters, an extra mark is added at the bottom right corner of the job by default. It is used They use it to detect the job orientation. Use **Disable extra mark at origin** if you do not want this extra mark to appear (especially for mirrored jobs).
The **Auto rotate job to fit cutter width** option works with the **Cutter limits** (and especially with the Width). This option is useful when the print width is too large to fit in the cutter and it needs to be rotated.

Example: if you have a 60x30 inch job that is printed on a 64-inch roll and your cutter is only 36 inches wide, you can rotate the job for the cut and the marks placement will rotate also.

Barcodes

The following settings apply to **Barcodes** and **QR Codes**. The side icons are the same as described in the previous section for **Edge Marks**. Similarly when the icon is , it is selected.

Side activated Side deactivated

These three settings are linked to the **Side** activation:

- **Mark placement**: for each side, you have four choices where to position the barcode:
  - Auto: Caldera RIP will place the barcode automatically.
  - First border: Left or Up depending on the side.
  - Center.
  - Second border: Right or Down depending on the side.
- **Anchor offset**: allows you to move the barcode, if you want to adjust its placement. This feature is not supported if Auto has been selected. The **Anchor offset** moves the barcode to the center. If it is already centered, a positive offset moves the barcode clockwise while a negative offset moves it counter-clockwise.
- **Image border margin**: defines the spacing between the image and the barcode. This feature is not supported if Auto has been selected.

Below the side settings, you can find the following options:

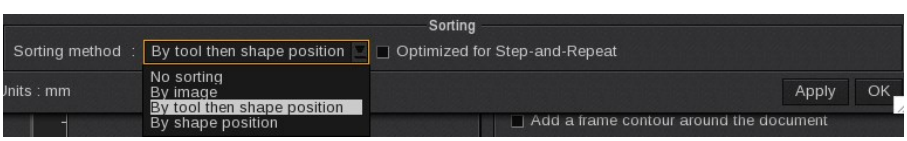
- **Barcode Size** : defines the size of the barcode.
- **ID Number Size**: defines the size of the ID number size.

Cutter limits

Here you can set the **Width** and **Height** of the cutter. These parameters work with the *"Auto rotate job to fit cutter width"* setting. If the job's width is too high, the job will rotate. If the height has been set, a check will be made to see if the rotated job can fit. If not, the RIP will undo the rotation.

Be careful, no warning will tell you that the job does not fit the cutters limits.

Sorting



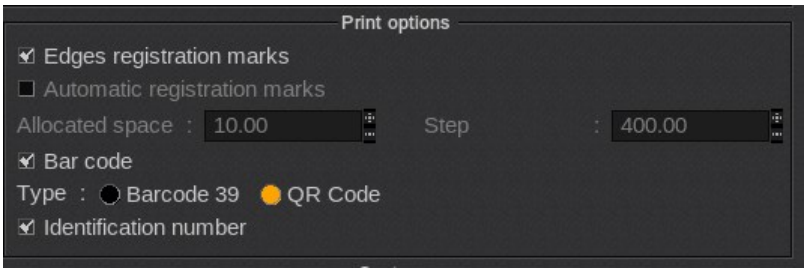
The **Sorting** method is for cutters driven by **GrandCut**. It will choose the optimized path to select the next contour to be cut in order to save time. This lets the user specify the cut order: by image, cut tool or shape.

Instant cutting

The **Instant cutting** area is where you select the action to print and instantly cut.

- ***Instant cut just after print***: when enabled prints the file and then immediately cuts the file.
- ***Use printer's registration marks***: when enabled generates printer registration marks to improve cutting accuracy. Best practice is to enable this feature for instant cut print jobs. Note: the registration marks will not appear in the preview window. This option is not available for every printer.

Print options

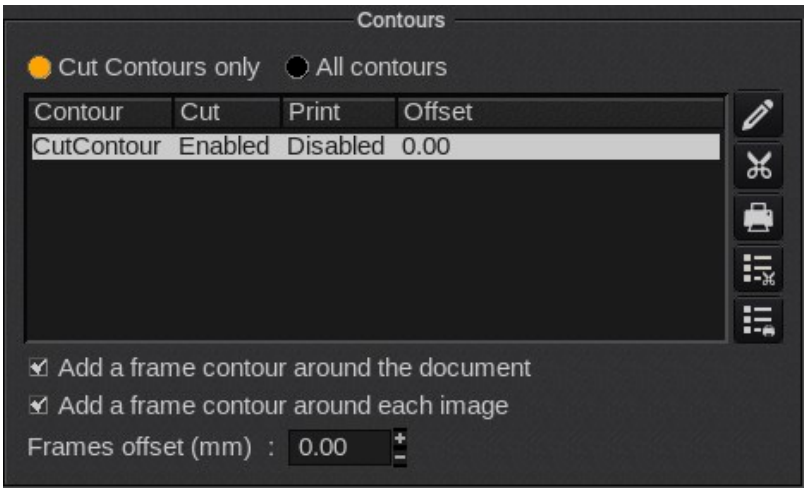


The **Print options** area has cutting features specific to a Cut workflow.

- **Edges registration marks**: when enabled generates RIP registration marks to allow for Print/Lam/Cut workflow. Note: the registration marks will appear in the preview window.
- **Automatic registration marks**: With this option, you can add cutting marks in the document between the image repetitions or between nested images. This feature is called **ExtraMarks**. You can choose the **allocated space** for each mark and the minimal space between them called the **Step**.
- **Bar code**: when enabled prints a barcode or a QR Code on each edge of the document so the operator can feed the media regardless of the orientation of the printed graphic. Then the operator can scan the barcode and the barcode scanner will automatically send the orientation of the graphic to **VisualCut**.
- **Identification number**: when enabled prints an identification number on each edge of the graphic so the operator can feed the media regardless of the orientation of the graphic. Then the operator can enter the identification number into **VisualCut** to automatically send the cut file with the correct orientation.

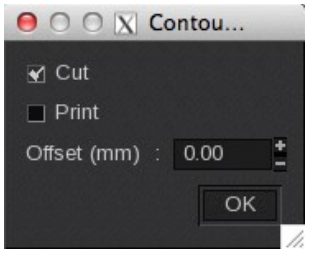
Note: If a feature is enabled but is grayed out, then that feature is not activated. This is caused by having two features enabled that are conflicting one another. Example: when enabling **Edges registration marks** and then enabling **Instant cut just after print**, the **Edges registration marks** grays out and the feature applied to the graphic is **Instant cut just after print**.

Contours



The **Contours** area is where you manage the actions for each cutting contour that appears in the graphic.

- **Use**: displays the cutting contours recognized in the graphic.
  - **Cut Contours only**: displays only cut contours.
  - **All contours**: displays all available cut contours including PerfCut.
-  ***Edit***: opens the ***Contour parameters*** window for the contour selected in the window.
  - **Cut**: enables or disables the cutting action for the selected contour.
  - **Print**: enables or disables the printing action for the selected contour. When enabled this action prints a line where the cutline appears in the file in the printed output.
  - **Offset**: changes the cut path by moving it inside (negative offset) or outside (positive offset) from the current cut path. The value ranges from -10.00 mm to +10.00 mm. This option is not used to compensate for the blade being used but rather to move the actual cutline in the graphic. Note: this feature is best used with oblong contours.



Offset examples:

Original: 0.00 mm offset.

Maximum offset: +10.00 mm.

Minimum offset: -10.00 mm.

-  ***Cut***: enables or disables the cutting action for the selected contour. The ***Edit...*** window is another location where you can manage this feature.

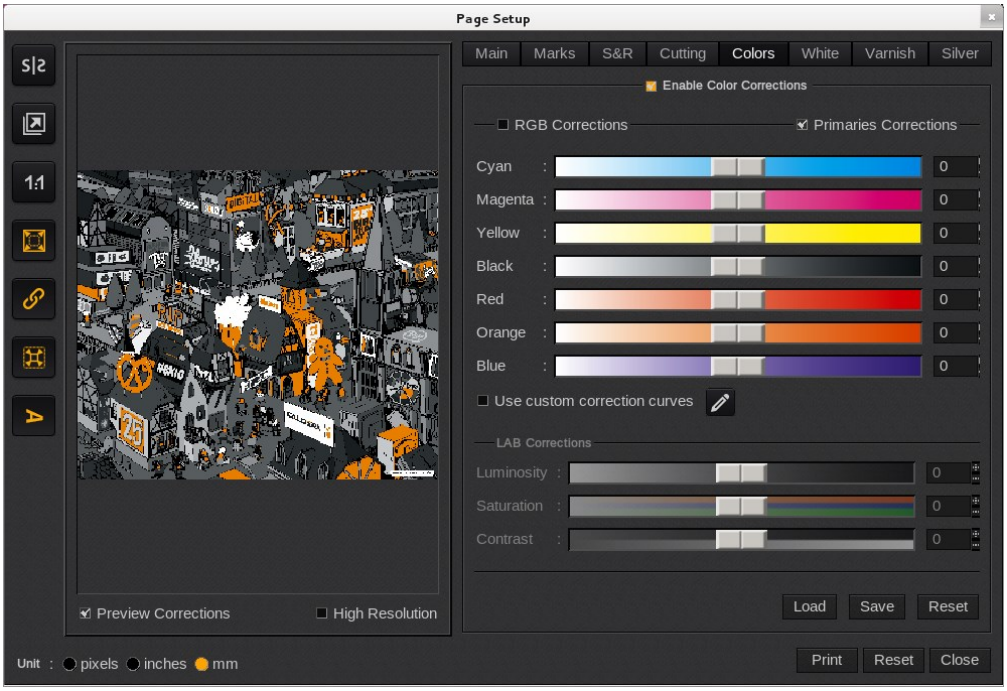
- ***Print***: enables or disables the printing action for the selected contour. When enabled this action prints a line where the cutline appears in the file in the printed output. The *Contour* window is another location where you can manage this feature.
- ***Cut all***: enables or disables the cutting action for all contours that appear in the graphic.
- ***Print all***: enables or disables the printing action for all contours that appear in the graphic.

By default, if the name of the contour begins with CutContour, the software will automatically enable cutting and disable printing for the contour.

- **Add a frame around the document**: when enabled prints a frame around the graphic.
- **Add a frame around each image**: when enabled prints a frame around each image in the graphic.
- **Frames offset**: when a frame is enabled, you can set its offset here.

Colors

The Colors tab is the last tab listed on the *Page Setup* window if your printer does not use special inks such as Metallic, White or Varnish. Check the box next to **Enable Color Corrections** to enable the features on this tab. The Colors tab is divided into two areas: **Primaries Corrections** and **LAB Corrections**.



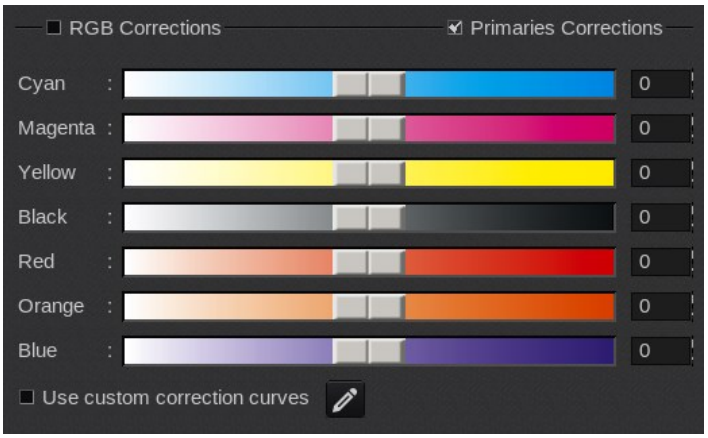
Preview

Activate the **Preview Corrections** and enable the **High Resolution** for a better view of your color corrections.

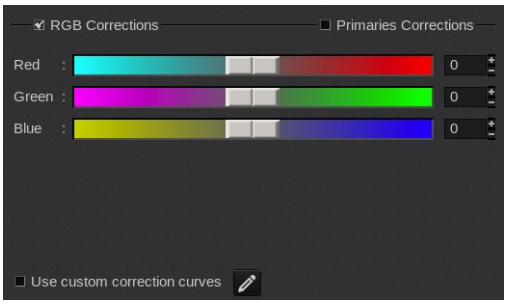
Note: the preview is not a softproof.

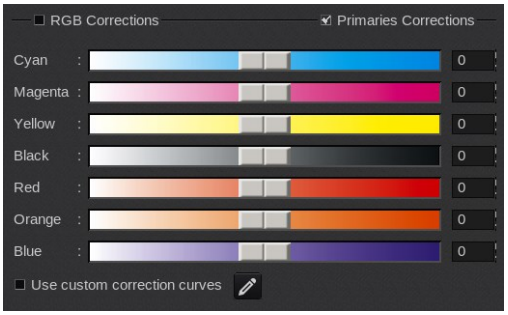
Each time you change one of these parameters, the preview will reset. As a result, you may find yourself zooming back into the image to see your changes.

Primaries Corrections

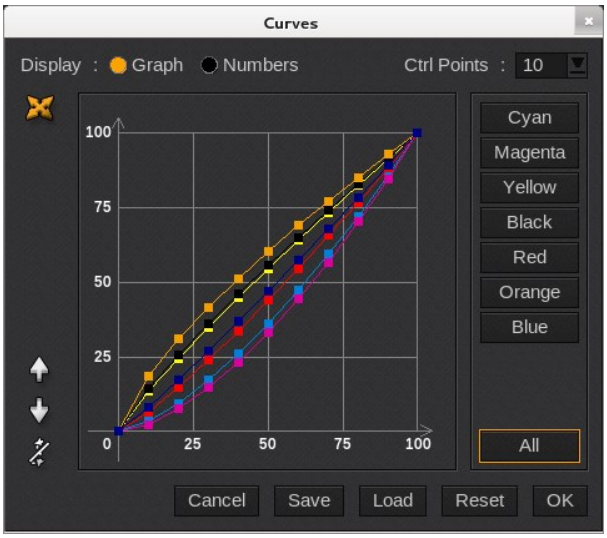


In this area, you can color correct primary colors. To adjust a color, move its cursor to the left or to the right. You can also manually enter a positive or negative value on the far right.
You can choose the correct the **RGB** or the **Primaries**. Just click on the proper checkbox to display the corresponding colors.



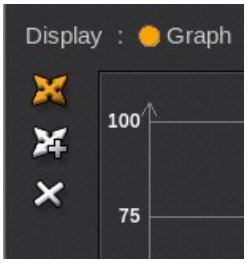


When you enable **Use custom correction**, it will activate the color correction using specific curves. Click ***Edit...*** to open the *Curves* window.



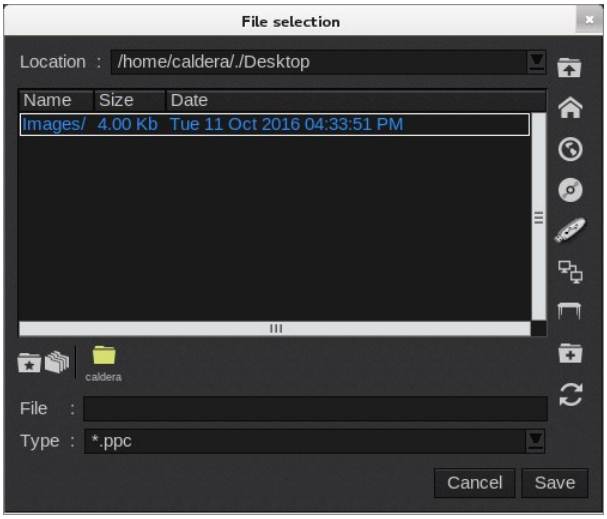
Here, you can:

- **Display**: displays the data either in a **Graph** or with **Numbers**.
- **Ctrl Points**: choose the number of control points used to create the curve: 5, 10, 20 or 100. You can also choose *Free*. In this case, two new buttons appear in Graph mode to add a new point and to remove one.



- **Cyan**, **Magenta**, **Yellow**, **Black** and **All**: selects the curve(s). When a curve is selected, you can see its control points. In our example all the curves were selected.
- **Raise**, **Lower** and **Straightens**: changes the curve's aspect by raising, lowering, or straightening it.

- ***Cancel***: closes the window without saving the changes.
- ***Save*** and ***Load***: saves or loads a curves correction file (ppc format). When clicked, the *File selection* window opens. Browse to the desired location to save or load.



- ***Reset***: applies the default values.
- ***OK***: saves the changes and closes the window.

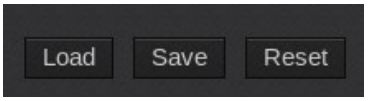
LAB Corrections

In this area, you can color correct LAB values: **Luminosity**, **Saturation** and **Contrast**.

LAB corrections are applied during color management, but before conversion to the output space. LAB corrections will preserve the neutrality of gray scales. To adjust a color, move its cursor to the left or to the right. You can also manually enter a positive or negative value on the far right.

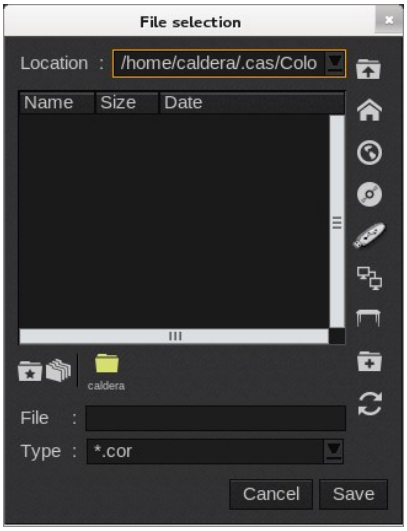
Be careful, if there is no corresponding ICC profile for your print configuration (if any of the resolution, media, mode or quality is displayed in red in the **Print** module interface), you will not be able to perform a **LAB Correction**.

Actions



The following actions apply to your color corrections.

- ***Load*** and ***Save***: saves or loads a color correction configuration (cor format). When clicked, the *File selection* window opens.

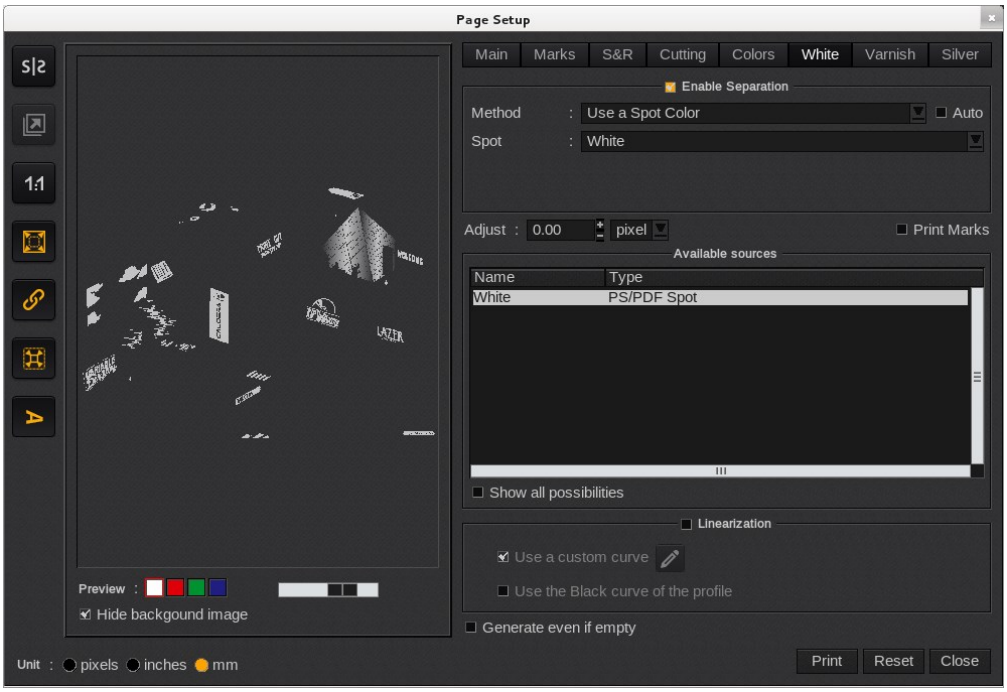


- ***Reset***: applies the default values.

Special Inks

When your printer uses **Special inks** such as White, Metallic or Varnish, specific tabs are created in the *Page Setup* window. All the tabs look the same and manage its specific ink. Check the box next to **Enable Separation**to enable the features on this tab.

These special inks are managed in the printer configuration on the module.



Preview

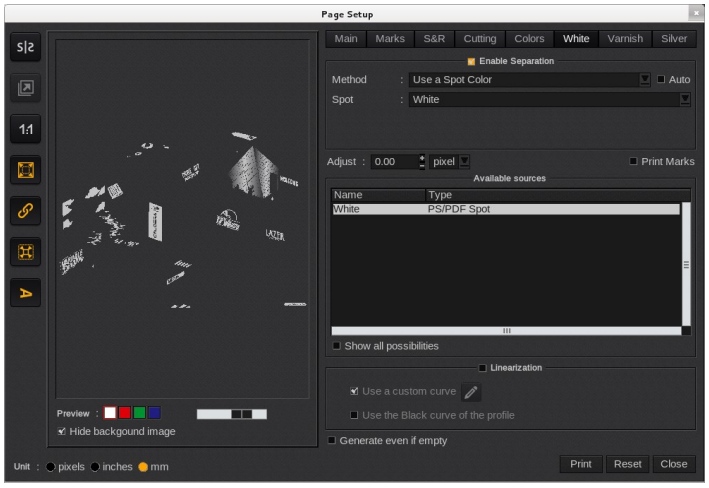
Use the **Preview** feature to easily identify where the special ink is being used in the graphic. You can assign a color to the special ink: White, Red, Green or Blue. To adjust the **Opacity** of the color you selected, use the slider. Select **Hide the background image** to display only the special ink in the preview.

Enable Separation

Here you will find the **Method** feature. The **Automatic** option is enabled by default and selects the best choice according to your image settings. Available **Method** options are:

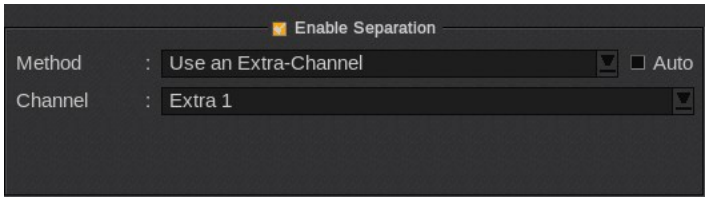
- **Use a Spot Color**: this is for localized special ink printing. Files need to be prepared in Prepress with a specific Spot Color.
- **Use an Extra-Channel**: this is for localized special ink printing. Files need to be prepared in Prepress with a specific Extra-Channel or Alpha layout.
- **Fill a Contour**: this is for localized special ink printing inside a cutcontour. Files need to be prepared in Prepress.
- **Generate from CMYK data**: the RIP generates the special ink layer based on the other inks densities. No special treatment is required on the files.
- **Full page coverage**: the RIP generates the special ink layer on the whole image background. No special treatment is required on the files.
- **Ink Penetration**: used for Textile, it defines how the Penetration (Fill-up) ink is added to the regular ink to ease its penetration on the fiber. No special treatment is required on the files as it uses the other inks densities for the calculation.

Use a Spot Color



Usually the Spot Color used is named after the Special Ink (White, Metallic, Varnish, etc.). The file must be designed properly to allow for spot color processing.
When you select **Use a Spot Color** you must also indicate which spot color in the **Spot** field. The **Spot** drop-down menu lists all the spot colors recognized in your file. If no spot color is recognized, than you cannot use this method.

Use an Extra Channel

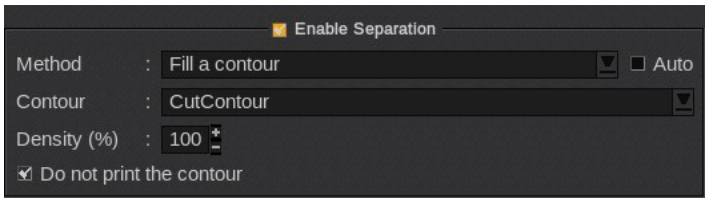


Extra-channel rasterization takes an extra-channel (or an alpha-channel) in a raster image (usually in TIFF format) and rasterizes it in the separation. This method requires preparing the image in an image processing application.
When you select **Use an Extra-Channel** you must also indicate which channel in the **Channel** field. The **Channel** drop-down menu lists all the extra-channels recognized in your file. If no extra-channel is recognized, than you cannot use this method.

If your extra-channel is not automatically selected, you can select it from the **Available sources** list.
When selecting an Alpha-Channel, you will have two options:

- ***Convert***: in this case, the layer was removed from the image so the default background color was the under-layer or black for RGB files or white for CMYK files if no under-layer was provided by the designer.
- ***Copy***: it is used to avoid the printing of the black for RGB files, it copies the alpha channel into the white channel and preserves the printed area as white.

Fill a contour

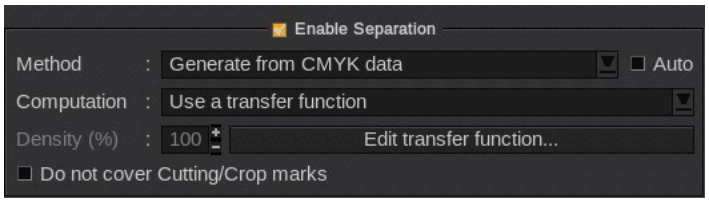


Contour filling consists of taking vector contours in a PS/PDF file and filling them to produce the ink separation. The file must be designed with a contour (e.g. CutContour) for this option to be available. The special ink density inside the contour cannot vary.
For this method, set the following parameters:

- **Contour**: lists available contours if your file has more than one.
- **Density**: sets the special ink density.
- **Do not print the contour**: when enabled, does not print the contour, only the area that is inside it.

Preview using Fill a contour.

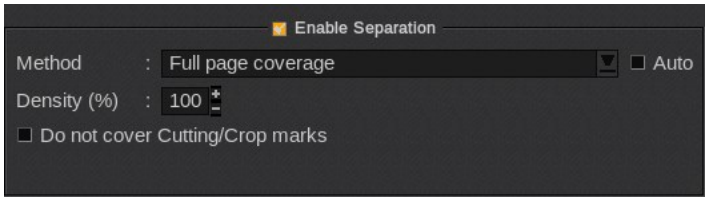
Generate from CMYK data



This method generates special ink percentages based on the underlying CMYK density.
For this method, set the following parameters:

- **Computation**: choose which computation method to use to place the special ink:
  - **Generate where there is some ink**: a special ink fill is added to areas where there is CMYK image data.
  - **Generate where there is no ink**: a special ink fill is added to areas where there is no CMYK image data.
  - **Use a transfer function**: a more precise method, uses a look up table to adjust special ink, by pixel, based on the density of CMYK ink.
- **Density**: sets the special ink density.
- ***Edit transfer function***: this button opens the curves to set the transfer computation method.
- **Do not cover Cutting/Crop marks**: avoids covering the crop or cutting marks with the ink.

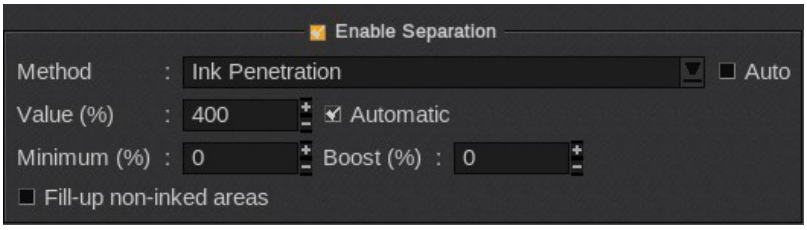
Full page coverage



This method generates a special ink fill over the entire image.
For this method, set the following parameters:

- **Density**: sets the special ink density to be applied by percentage.
- **Do not cover Cutting/Crop marks**: avoids covering the crop or cutting marks with the ink.

Ink Penetration



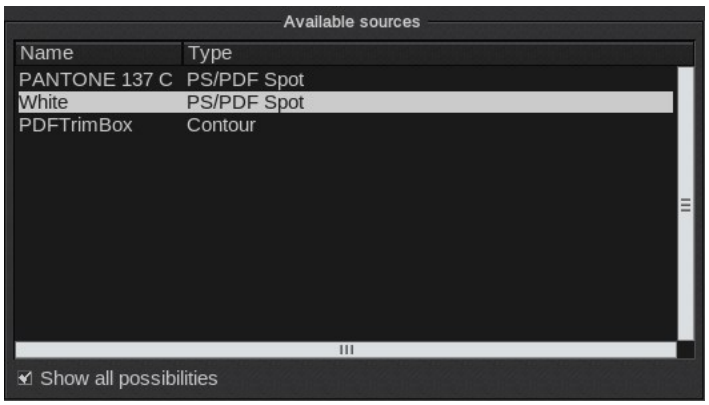
This method is used in Textile printing. It adds "Penetration" or Fill-up liquid to ease the absorption of the inks by the textile. It allows you to have a fixed amount of ink everywhere on the print.

- **Value (%)**: defines the amount of ink you want to maintain on your media (total coverage). It includes the normal inks and the primer so, if the inks already exceeds the **Value**, no fill-up ink will be added (unless a **Minimum** has been set).
- **Automatic**: sets the value to the Ink-limit defined during the profile creation. This is the default behavior.
- **Minimum (%)**: applies always at least this percentage of fill-up ink.
- **Boost (%)**: boosts the value that should be inserted by this percentage. This is used for light inks only.
- **Fill-up non-inked areas**: allows the fill-up ink to be used even on non-inked areas of the job.

Adjust & print marks

The **Adjust** function allows you to, either in pixel, millimeters or inches, expand or retract the special ink covering.
Print Marks is not compatible with the **Full page coverage** or the **Generate from CMYK data** separation methods. This feature allows you to print all the marks using the special ink (crop marks, cutting marks, etc.).

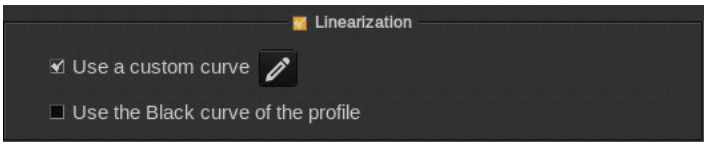
Available sources



This box lists the special inks that are recognized in your design file which can be used with the separation methods.

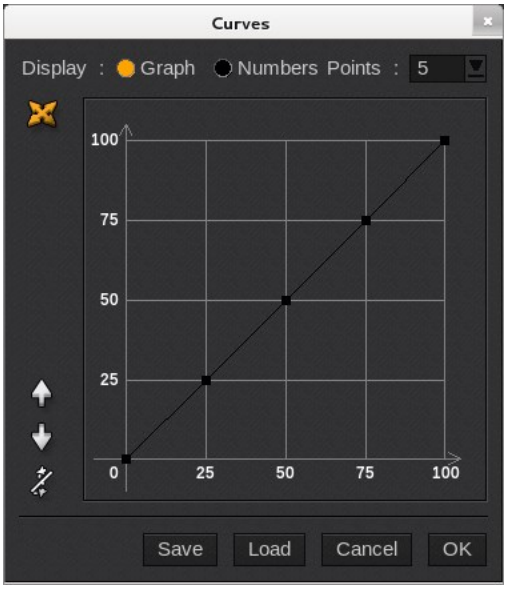
The first button filters the elements that have been recognized for the current special ink whereas the second button shows all the elements.

Linearization



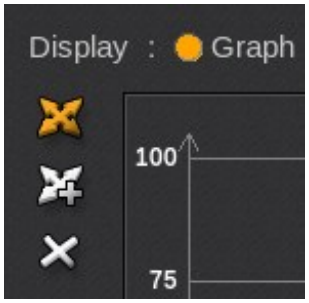
In this area, you can linearize the special ink. It is used to set maximum limit to Special Inks. Click on the check-box labeled **Linearization** to enable this feature. You have two choices for the curve to use:

- **Use the Black curve of the profile**: White limitation is often linked to other inks maximum (due to resolution and media chosen), this feature allows to link the black ink linearization to the white behavior and to have it automatically print-mode dependent.
- **Use a custom curve**: allows you to create or load a specific curve if the previous option is not satisfying. Click on ***Edit***  to display the *Curves* window:



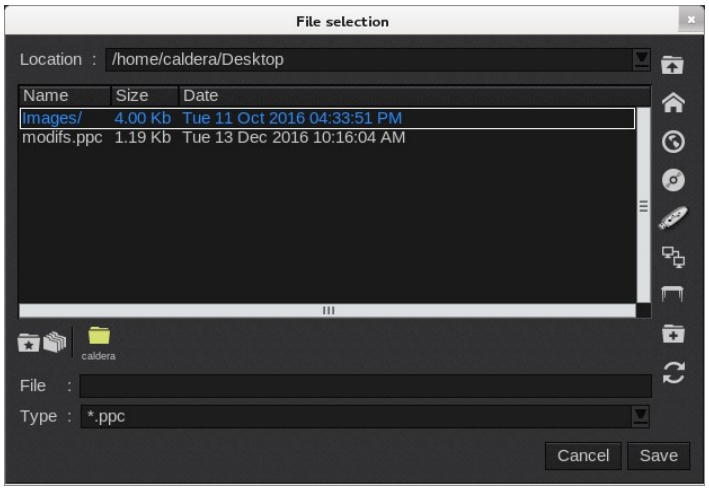
Here, you can:

- **Display**: displays the data either in a **Graph** or with **Numbers**.
- **Ctrl Points**: chooses the number of control points used to create the curve: 5, 10, 20 or 100. You can also choose *Free*. In this case, two new buttons appears in Graph mode to add a new point and to remove one.



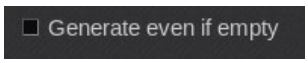
- **Raise**, **Lower** and **Straightens** curve: changes the curve's aspect by raising, lowering or straightening it.

- ***Cancel***: closes the window without saving the changes.
- ***Save*** and ***Load***: saves or loads a Curves correction file (ppc format). When clicked, the *File selection* window opens. Browse to the desired location to save or load.



- ***Reset***: applies the default values.
- ***OK***: saves the changes and closes the window.

Generate even if empty



By default the setting **Generate even if empty** is disabled. This means the print will not produce an empty separation, even if **Enable Separation** is activated. This is very useful when you use **Workflow** or **QuickPrint** with images that have or don't have any special inks in it. When enabled, it forces the printer driver to generate an empty separation even if there is no data for this colorant.

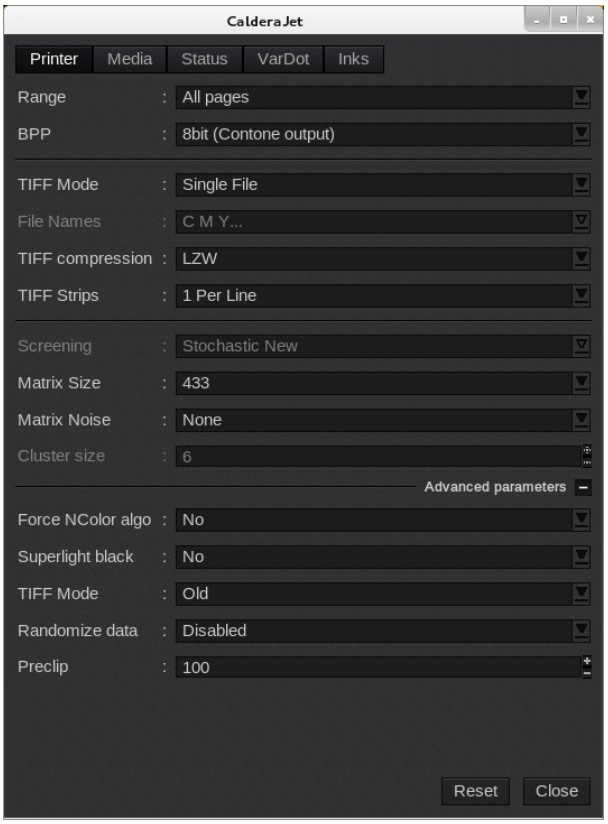
Printer Settings

The *Printer Settings* window normally displays at least these three tabs: Printer, Media and Status. The number of tabs may vary depending on your printer driver. Some printer drivers display more settings than others.

Open the Printer Settings window

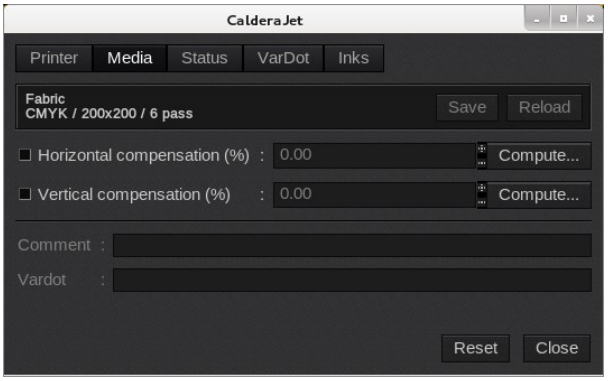
Click on the second icon button of the **Print** module main window.

Printer



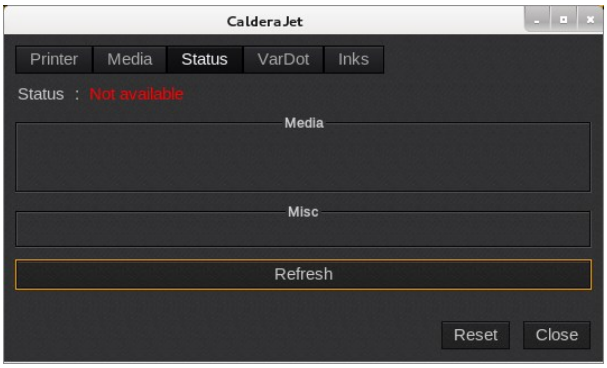
The Printer tab displays the main settings of the printer. Once again the options listed will vary depending on your printer driver.

Media



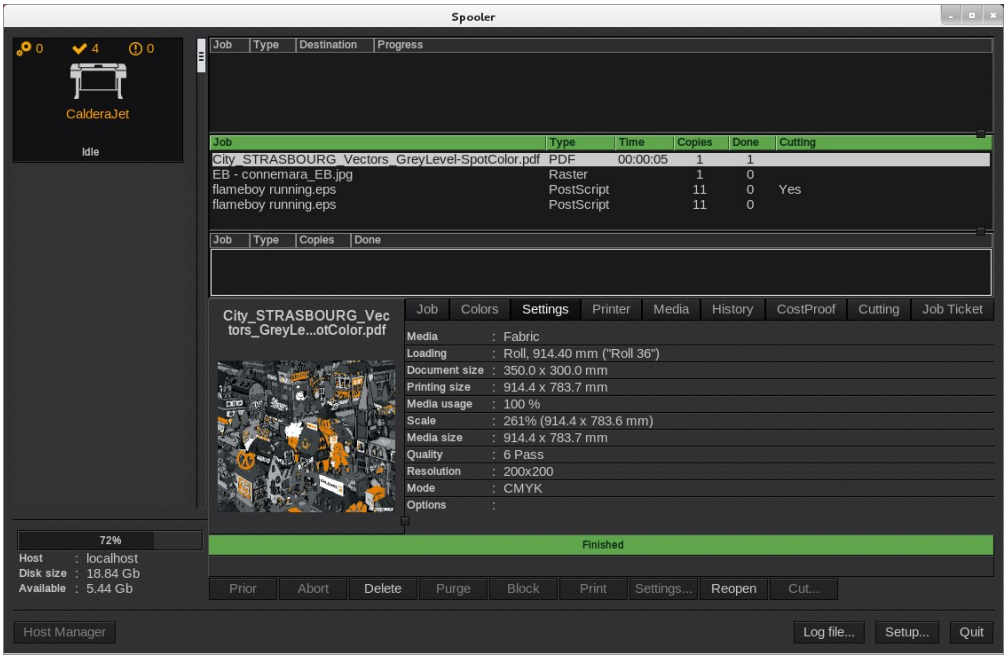
The Media tab displays parameters that are linked to the media or that can be changed depending on the media.

Status



The Status tab displays the status of the printer. This tab may not show advanced status features like inks or media depending on the printer driver.

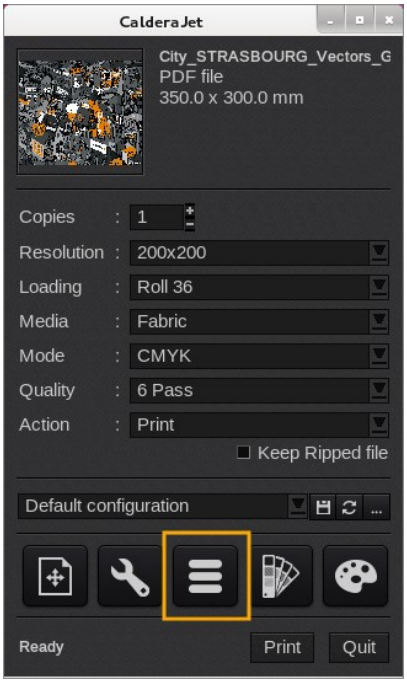
Spooler



Please refer to the **Spooler** User Manual.

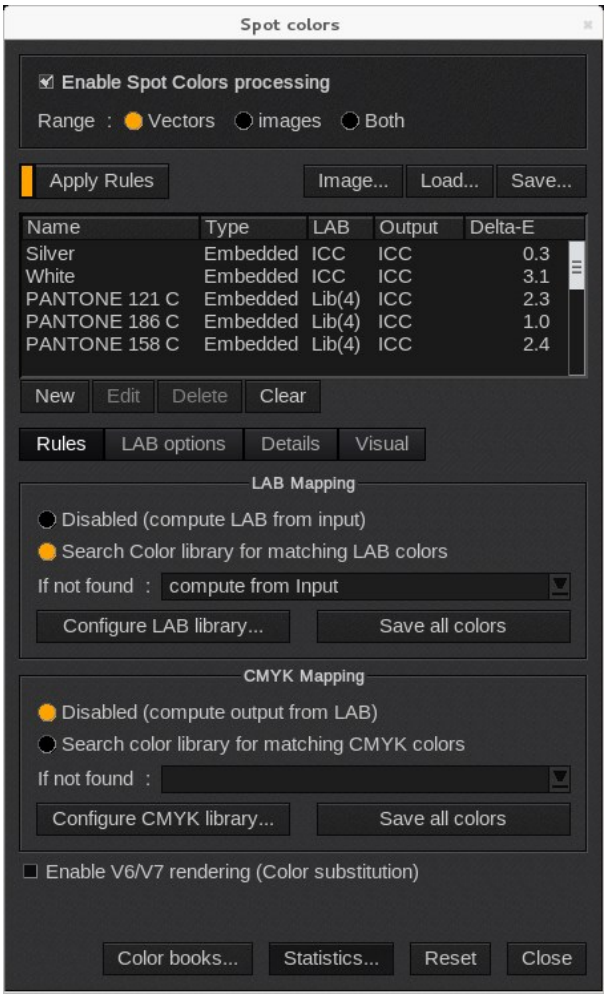
Open the Spooler window

Click on the third icon button of the **Print** module main window.



Spot Colors

The *Spot Colors* window allows you to manage the spot colors that appear in your file.



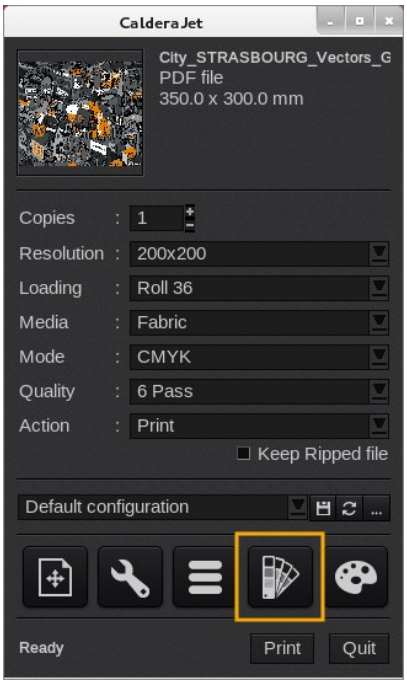
In Caldera RIP software, spot colors are automatically recognized when the image is uploaded using the Fileman module.

The *Spot Colors* window is divided into several sections:

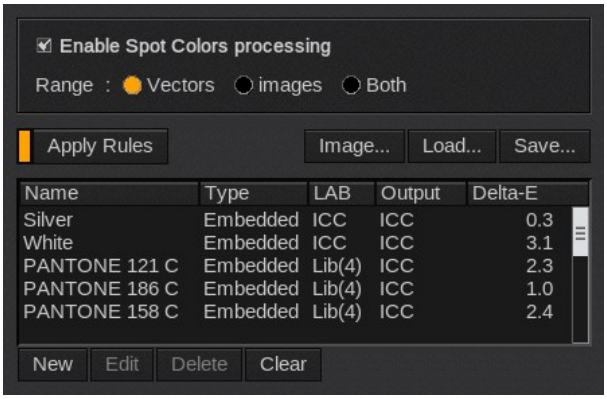
- **Upper window**: enables the spot colors window, lists global functions and lists the spot colors recognized in your file.
- Rules tab: defines the rules that are applied to the spot colors.
- LAB options tab: defines the rules applied to the LAB values of the spot colors.
- Details tab: allows you to set the parameters for each spot color.
- Visual tab: displays the image and allows you to make some modifications of the spot colors.
- ***Color books*** button: opens the *ColorBook* generator window.
- ***Statistics*** button: opens the *Statistics* window.

Open the Spot Colors window

Click on the fourth icon button of the **Print** module main window.



Upper window



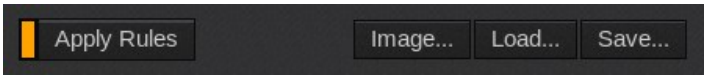
This area contains: **Enable spot colors,** the **Global functions** and the **Spot color list.**

Enable spot colors

This area contains the following elements:

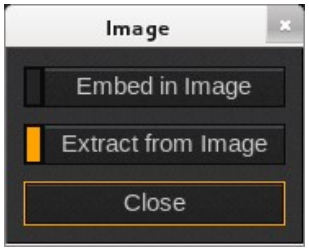
- **Enable spot colors processing**: activates the spot colors.
- **Range**:
  - **Vectors**: applies the spot colors to vectors of the image.
  - **Images**: applies the spot colors to raster data only.
  - **Both**: applies the spot colors to both vector and raster data.

Global functions



The available functions are:

- ***Apply Rules***: enabled by default. This applies the rules defined in the Rules tab. It is used for Automation purposes (**Workflow** and **QuickPrint**).
- ***Image...***: opens the ***Image*** window.

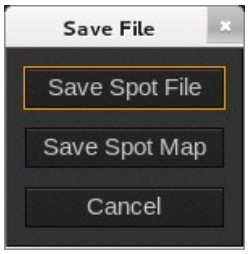


  - ***Embed in Image***: embeds the entire list of spot colors in your image. As long as the image stays in the **ImageBar**, each time you drag it to a **Print** module, the spot colors will be recognized.
  - ***Extract from Image***: reloads the list of colors embedded in the image. It automatically extracts the colors each time a new image is loaded into the **Print** module.
  - ***Close***: closes the ***Image*** window.
- ***Load...***: loads the spot colors file.
  - ***Load Spot File***: loads a list of defined spot colors (.spot file format). When you click ***Load***, choose between the following:

    - ***Append***: adds the spot colors to the list.
    - ***Replace***: replaces the spot colors in the list.
    - ***Cancel***: cancels the action without saving.
  - ***Load Spot Map***: loads a list of defined spot colors, as well as their CMYK output values: the color substitutions (.spotmap file format). When you click ***Load...***, the following options appear:

    - ***Append***: adds the spot colors to the list.
    - ***Replace***: replaces the spot colors in the list.
    - ***Cancel***: cancels the action and returns to the previous window.
  - ***Cancel***: closes the window without saving the changes.

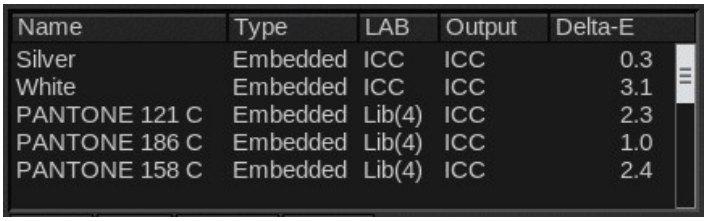
- ***Save...***: saves the current spot colors into a file



- ***Save Spot File***: saves the list of defined spot colors (.spot file format).
- ***Save Spot Map***: saves the list of defined spot colors, as well as their CMYK output values: the color substitutions (.spotmap file format).
- ***Cancel***: closes the window without saving the changes.

The spot color list

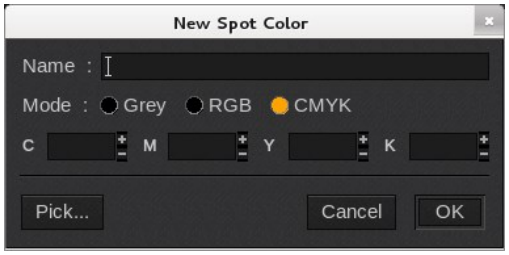
The spot color list displays information on each spot color. Click a header to sort the list by ascending or descending order.



- **Name**: Name of the spot color.
- **Type**: Type of the Color
  - *Embedded*: the color was recognized in the file.
  - *Additional*: the color was added in the Visual tab.
- **LAB**: indicates where the LAB values come from:
  - *Lib*: the spot color was found in the library.
  - *ICC*: the output values were computed from the input values.
  - *Custom*: the LAB values were set up directly in the Details tab.
- **Output**: indicates where the output (CMYK, CMYKcm, CMYKOG...) values come from:
  - *Lib*: the spot color was found in the device library (direct CMYK mapping).
  - *ICC*: the output values were computed from the LAB values.
  - *Custom*: the output values have been directly set up in the Details tab.
- **Delta-E**: lists the distance between the LAB input value and the LAB output value of the color. A Delta-E less than 2 means that the reproduction of the color will be very good. A Delta-E greater than 10 means the reproduced color will be noticably different than expected.

Below the spot colors list there are four buttons:

- ***New***: opens the *New Spot Color* window to create a new spot color.



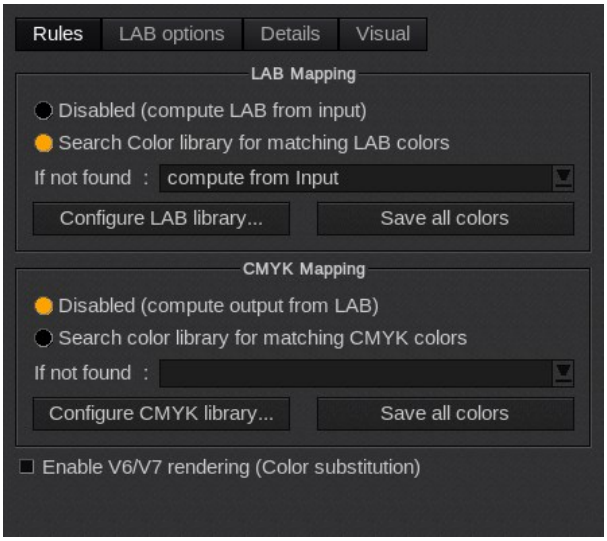
- **Name**: applies a name to the spot color.
- **Mode**: defines the color space of the spot color between Grey, RGB and CMYK.

- **Values**: defines the spot color values. The components depends on the **Mode**. Values can be entered manually or automatically using the ***Pick*** button.
- ***Pick...***: opens the Visual tab with the color picker tools to select the color directly on the image. When selected, the values are filled in the Values field.
- ***Cancel***: closes the window without saving.
- ***OK***: saves the new spot color and closes the window.

- ***Edit***: opens the *Spot Color Edition* window to edit the spot color.

- ***Delete***: removes the spot color from the list.
- ***Clear***: removes all the spot colors from the list.

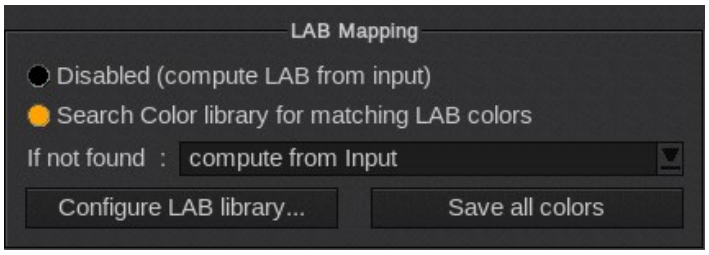
The Rules tab



The Rules tab allows you to define rules (these actions are initiated by default) in the LAB and CMYK color spaces. The purpose is to avoid having to manually define all the spot colors in an image.

- **Enable V6/V7 rendering**: uses an algorithm which works by simple color substitution. This algorithm will not process non solid spot colors, spot colors in gradations, or spot colors behind a transparency.

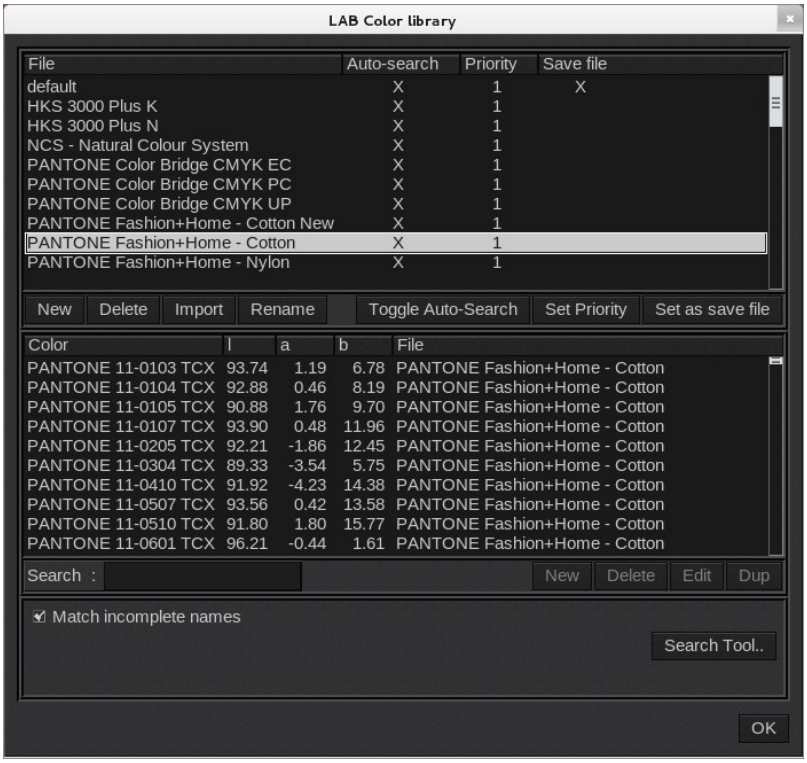
LAB Mapping



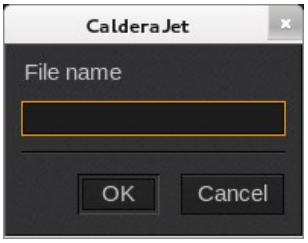
This section defines the rules that are used to retrieve the LAB values of a spot color.

- **Disabled (compute LAB from input)**: processes spot colors through the ICC engine.
- **Search Color library for matching LAB colors**: searches for the spot color in the libraries.

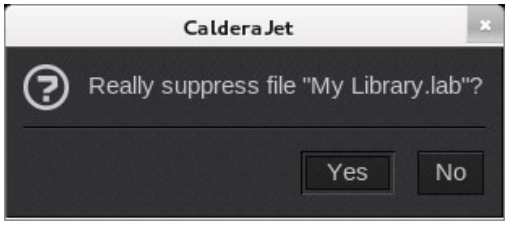
- **If not found**: if no corresponding color is found in the library, you can choose:
  - *Compute from input*: computes the color in ICC.
  - *Disable color*: prints the color as a process color, not a spot color.
  - *Do not print*: prevents the image from being printed. When this option is selected you will need to resolve the issue before the image can be printed. This option is helpful for color critical print jobs where the spot color must be accurate.
- ***Configure LAB library***: opens the *LAB Color library* window.



  - ***New***: creates a new library. Enter a name for the new library.

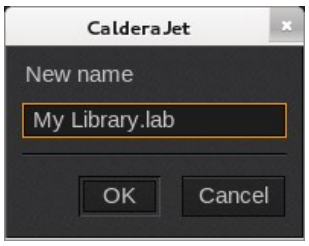


  - ***Delete***: deletes the selected library file. You will be prompted to confirm that you want to delete your selection.

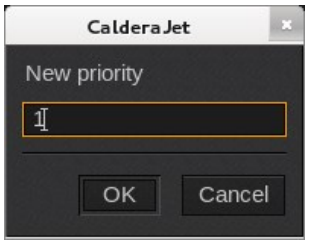


  - ***Import***: imports a new library file to the list.

- ***Rename***: opens a dialog box allowing you to rename the selected file. You can only rename custom libraries.



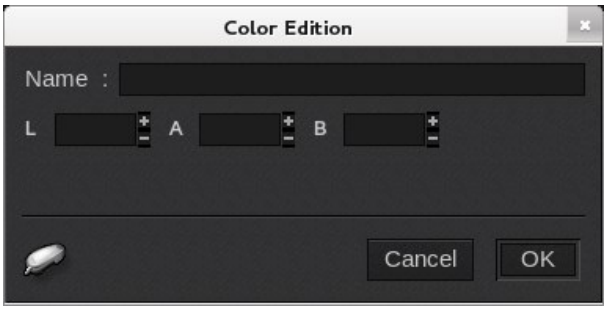
- ***Toggle Auto-Search***: adds or removes the search in a library file. When there is an X in the **Auto-search** column, the file library will be parsed to find a match to the searched color. By default, the auto-search in the library is enabled.



- ***Set Priority***: indicates a level of priority. The search for a matching spot color will be done according to this priority, "1" being the highest priority. You can then change it following an ascending order that decreases the priority level. By default, the priority is 1.
- ***Set as save file***: sets the custom library selected as the one where new spot colors will be saved by default.

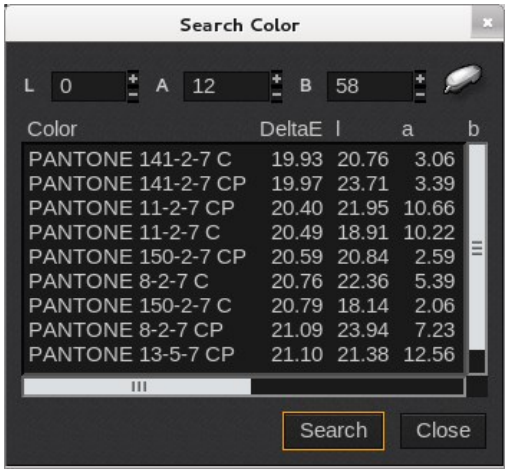
In the second part of the *LAB Color library* window, you can find:

- **Search**: searches the color name you want to find in the libraries.
- ***New***: adds a new spot color to the selected list. Enter a **Name** and the **LAB** values. You can use a spectrophotometer to get these values using the icon spectrophotometer.



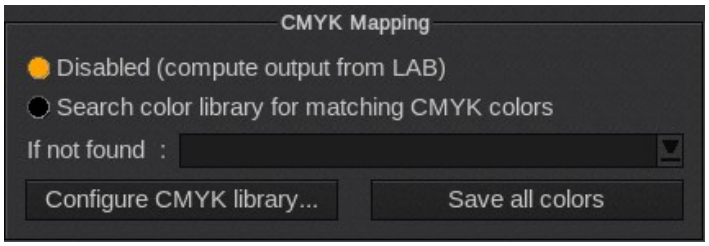
- ***Delete***: deletes the spot color from the list.
- ***Edit***: reopens the *Color Edition* window to change the color name and/or LAB values.
- ***Dup***: creates a copy of the selected spot color. Opens the *Color Edition* window where you can create a new name and change the color values. This is helpful for when you want to create a new spot color with values close to the original spot color.
- **Match incomplete names**: searches the libraries for partial matches.

- ***Search Tools***: opens the *Search Color* window. Here you can search for a spot color using its LAB values. Enter the LAB values manually or get them using a spectrophotometer. Then click ***Search***. The color is searched for in the selected library and up to 10 sort results may appear. The results are listed by their DeltaE.



- ***Save all colors***: saves all colors in the current "Save file" library with their LAB values.

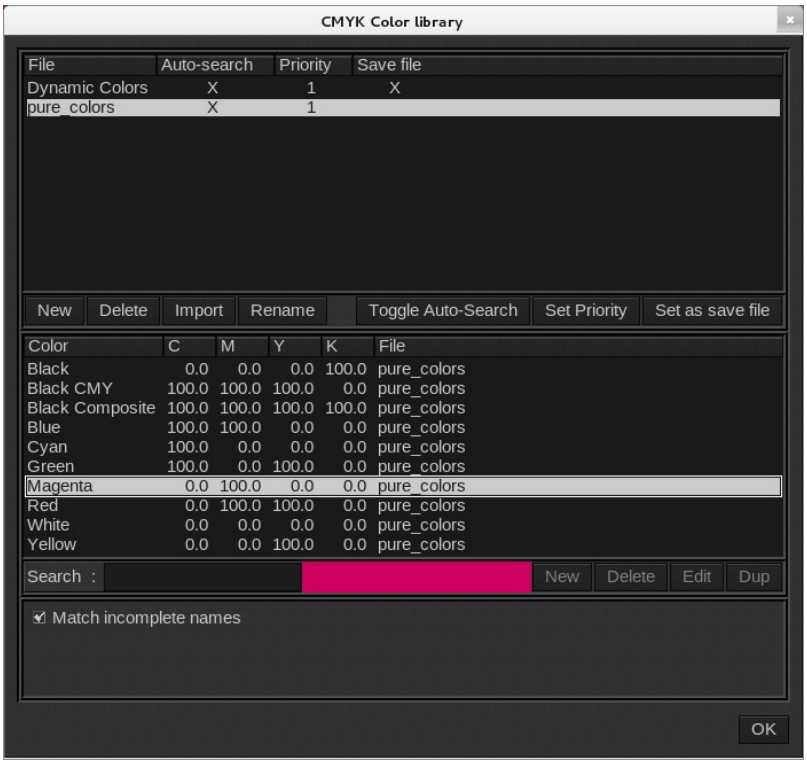
CMYK Mapping



This section defines the rules that are used to find the CMYK values of a spot color.

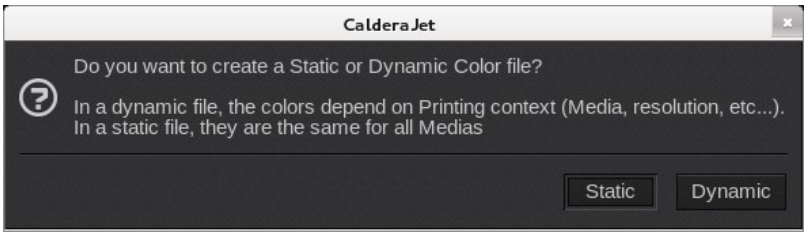
- **Disabled (compute ouput from LAB)**: colors are processed through the ICC engine, from the LAB values of the spot color.
- **Search Color library for matching CMYK colors**: searches for the spot color in the libraries.
- **If not found**: if no corresponding color is found in the library, you can choose:
  - *Compute from LAB*: computes the color in ICC.
  - *Disable color*: prints the color as a process color, not a spot color.
  - *Do not print*: prevents the image from being printed. When this option is selected you will need to resolve the issue before the image can be printed. This option is helpful for color critical print jobs where the spot color must be accurate.

- ***Configure CMYK library***: opens the *CMYK Color library* window.



As you can see on the preview, the pure_colors library contains spot colors defined with 100% of their CMYK component: Magenta is 100% Magenta only while RED is 100% Magenta and Yellow, for example.

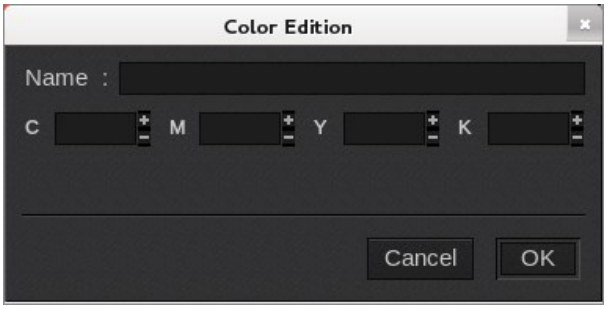
- ***New***: creates a new library. First, you need to choose whether you want to create a **Dynamic** or a **Static** library. Dynamic spot colors depend on the printing context (resolution, media, quality...) whereas static libraries are the same for all medias. When you have chosen your type of library, enter the library name in the window that appears.



- ***Delete***: deletes the selected library file. You must confirm the deletion.
- ***Import***: allows you to import a new library file to the list.
- ***Rename***: opens a dialog box allowing you to rename the selected file. You can only rename custom libraries.
- ***Toggle Auto-Search***: adds or removes the search in a library file. When there is a cross in the **Auto-search** column, the file library will be parsed to find a match to the researched color. By default, the auto-search in the library is enabled.
- ***Set Priority***: indicates a number of priority. The search of the matching spot color will be done accordingly to this priority: low numbers first. By default, the priority is 1.
- ***Set as save file***: sets the custom library selected as the one where new spot colors will be saved by default.

In the second part of the *CMYK Color library* window, you can find:

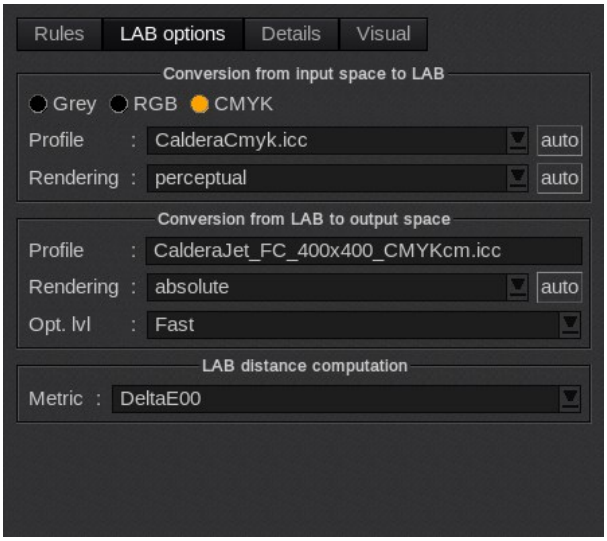
- **Search**: enter in this field the color name you want to find in the libraries.
- ***New***: adds a new spot color to the selected list. Enter a **Name** and the **CMYK** values.



- ***Delete***: deletes the spot color from the list.
- ***Edit***: reopens the *Color Edition* window to change the color name and/or values.
- ***Dup***: creates a copy of the selected spot color. It opens the *Color Edition* window where you can add a new name or change the colors if you want to create a new spot color with close values.
- **Match incomplete names**:searches the libraries for partial matches.

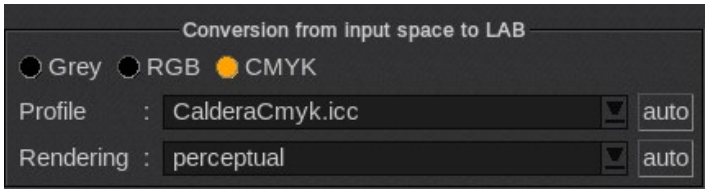
- ***Save all colors***: saves all colors in the current "Save file" library with their CMYK values.

The LAB Options tab



The LAB Options tab allows you to define the profiles used for the LAB conversions.

Input space to LAB

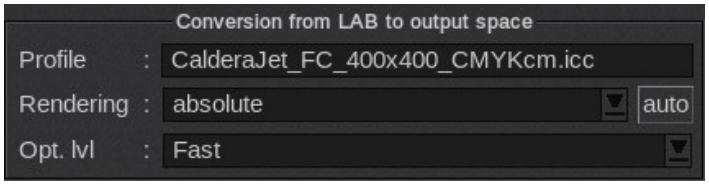


Here you can choose the options for the conversion from the Input space to LAB.

- **Profile**: choose the input profile.
- **Rendering**: displays rendering options: *perceptual*, *colorimetric*, *saturation* and *absolute*.

The ***Auto*** option is activated by default. This means the colors will be rendered by the option selected in the ***Color Management*** window.

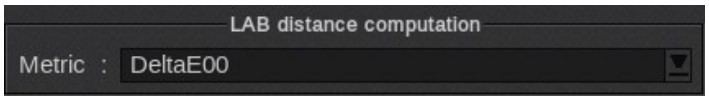
LAB to Output space



This section allows you to choose the options for the conversion from the LAB to the Input space.

- **Profile**: defines the output profile. Defaults to the profile of the current media.
- **Rendering**: displays rendering options: *perceptual*, *colorimetric*, *saturation*, *absolute*, *opt. colorimetric* and *opt. absolute*. When you select *opt. colorimetric* or *op. absolute*, the best values matching the desired spot colors will be automatically searched for within the color of the printer's gamut.
- **Opt. lvl**: sets the duration of the search for colors when choosing an **opt.** rendering. Choose *Fast* if you need to process a lot of spot colors (for instance, if printing a color target). If there are only a few colors to compute, you can select *Complete*. *Balanced* is an average value.

LAB distance computation



This option determines how the variance between the colors will be calculated.

- **Metric**: choose here the DeltaE calculation between: *DeltaE*, *DeltaE94 Textile*, *DeltaE 94 Graphics*, *DeltaE00* and *DeltaE DIN99o*.

The Details tab

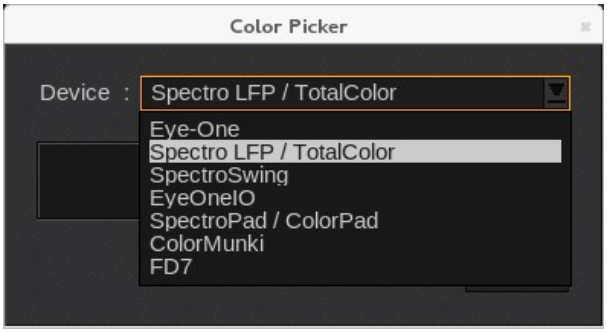
In the Details tab you can set the parameters for each spot color to ensure accurate color reproduction. Here you can manually define the LAB or CMYK output values for a selected spot color.
The selected spot color CMYK input values are displayed on the top of the tab.

LAB

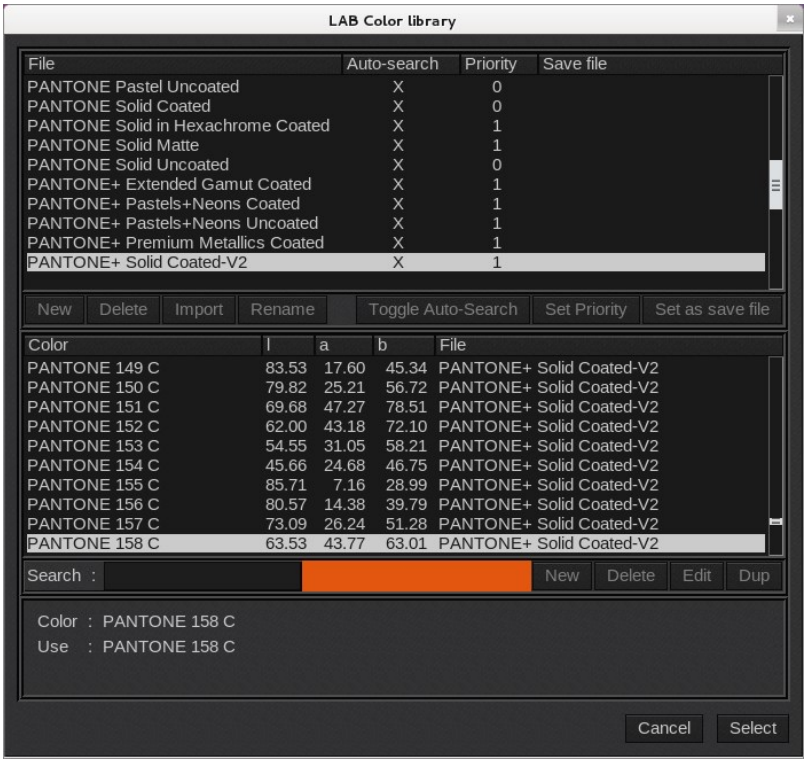
Spot Colors

In this section you can define the input color in the LAB color space.

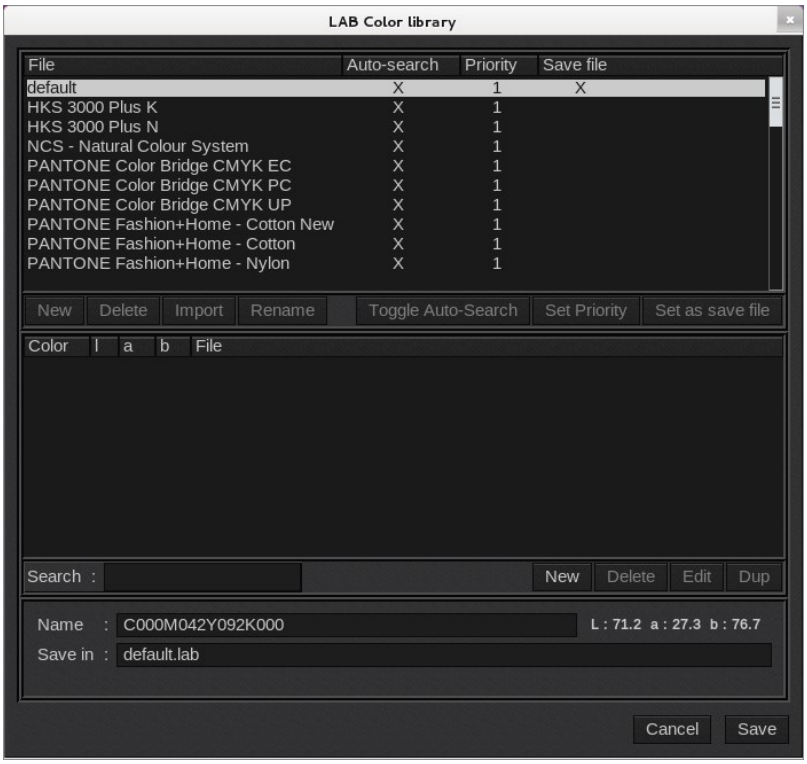
- **Use Library**: searches for the color in one of the variable files. If the color exists under a different name, you can either edit its name, or search for the color in the libraries (see Library).
- **Use ICC**: if the color cannot be retrieved in a library, its LAB value will be computed using the input CMYK values, as if it were a process color.
- **Rendering**: when **Use ICC** is activated, your rendering options are: *perceptual*, *colorimetric*, *saturation* and *absolute*.
- **LAB**: manually enter the LAB values into these fields.
-  Spectrophotometer icon: uses a spectrophotometer to get the LAB input values.



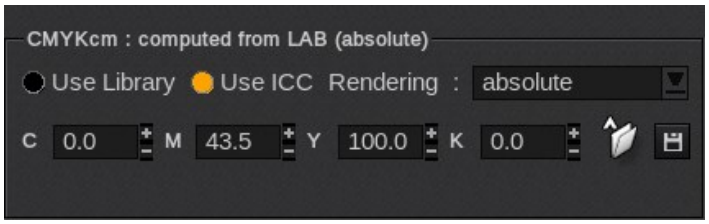
-  Library icon: opens the *LAB Color library* window so you can search for a spot color in a specific color library. Select your color library from the **File** list. Then select the spot color from the **Color** list. You can use the **Search** field to help you find the spot color by its name. The ***New***, ***Delete***, ***Edit*** and ***Dup*** buttons shown below are only available for spot colors that belong to a custom library.



-  Save icon: saves the spot color to a library. Enter a name for the spot color and then select a library from the library list. Your spot color will be saved to the library you select.



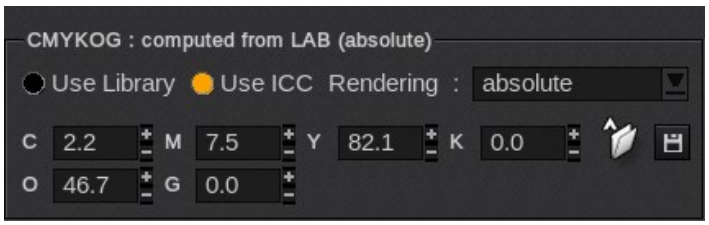
CMYK



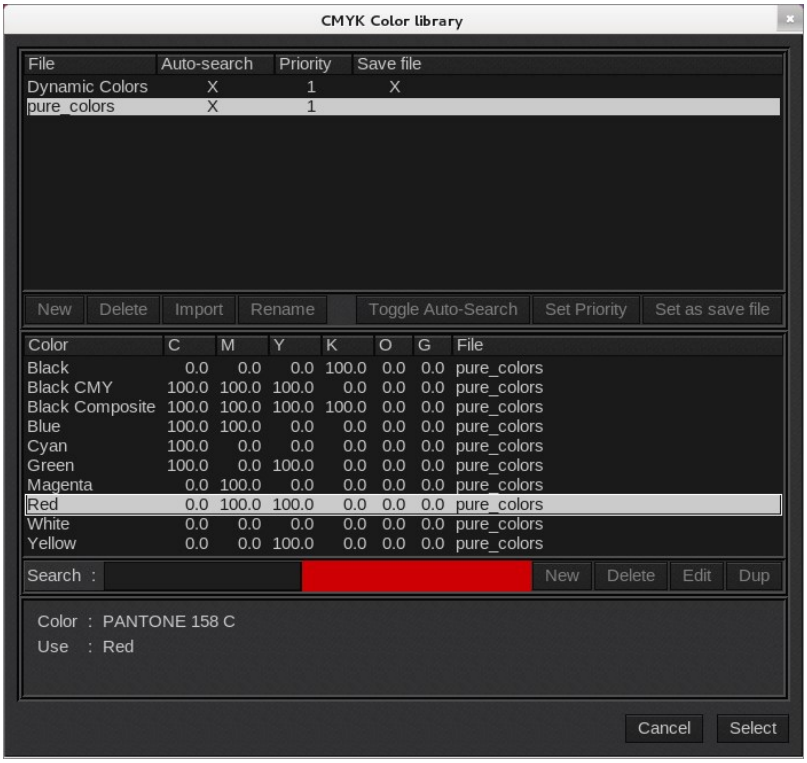
In this section you can define the output color values that are used to print the spot color.

- **Use Library**: searches for the color in one of the variable files. If the color exists under a different name, you can either edit its name, or search for the color in the libraries (see Library).
- **Use ICC**: if the color cannot be retrieved in a library, its values will be computed using the ICC profile, as if it were a process color.
- **Rendering**: when **Use ICC** is activated, your rendering options are: *perceptual*, *colorimetric*, *saturation*, *absolute*, *opt. colorimetric* and *opt. absolute*.
- **CMYK...**: manually enter the CMYK values here. If the profile is NColor, the other components can be set here too.

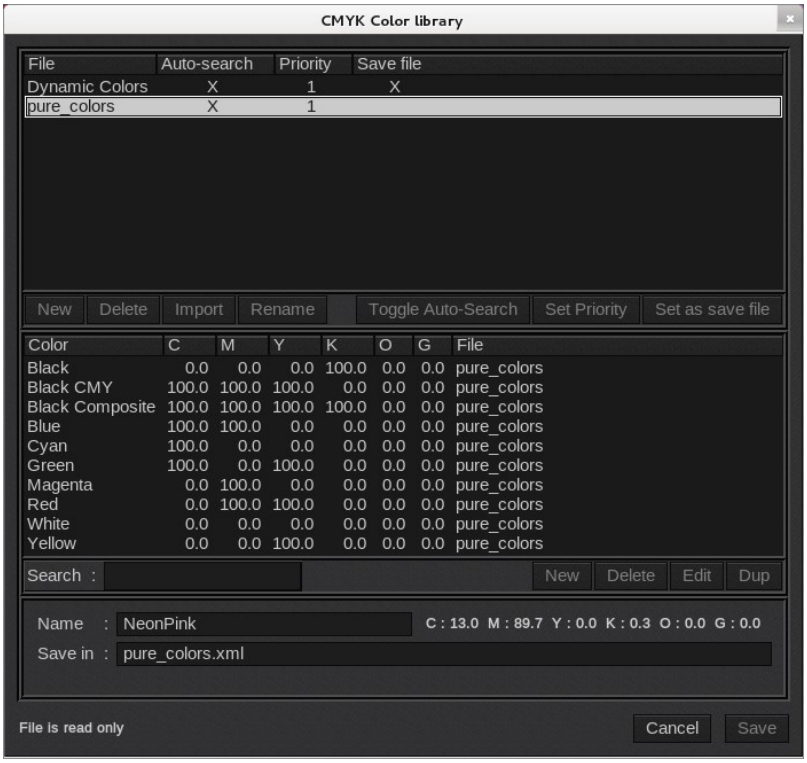
NColor is the term used to describe profiles that use extra inks as standard components such as Orange or Green. CMYKOG, CMYKOV, CMYKB are NColor profiles for example.



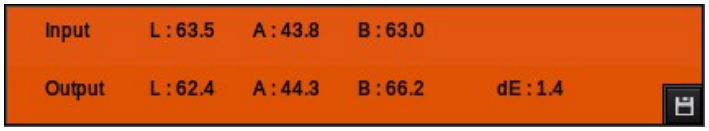
-  Library icon: opens the *CMYK Color library* window so you can search for a spot color in a specific color library. Select your color library from the **File** list. Then select the spot color from the **Color** list. You can use the **Search** field to help you find the spot color by its name. The ***New***, ***Delete***, ***Edit*** and ***Dup*** buttons shown below are only available for spot colors that belong to a custom library.



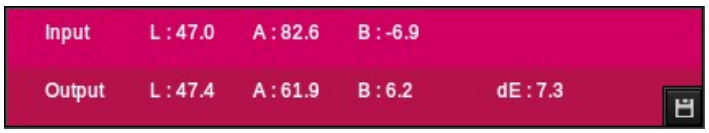
-  Save icon: saves the spot color to a library. Enter a name for the spot color and then select a library from the library list. Your spot color will be saved to the library you select.



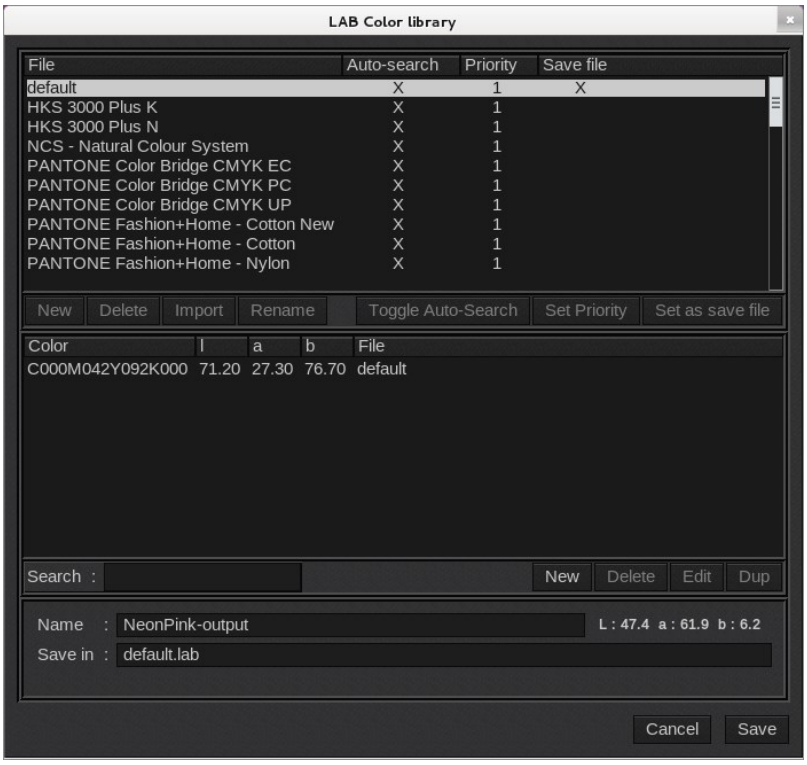
Simulation



Here you can see the simulation on the screen of the Input and Output LAB values. Each color is represented so you can visually see the difference between them:



- **Input**: this is the simulation of the Input LAB values and color.
- **Output**: this is the simulation of the Output LAB values and color.
- **dE**: this is the variance between the Input and Output values using the Delta-E method set in the LAB options tab.
-  Save icon: saves the spot color to a library. Enter a name for the spot color and then select a library from the library list. Your spot color will be saved to the library you select. This saves the Output LAB values.

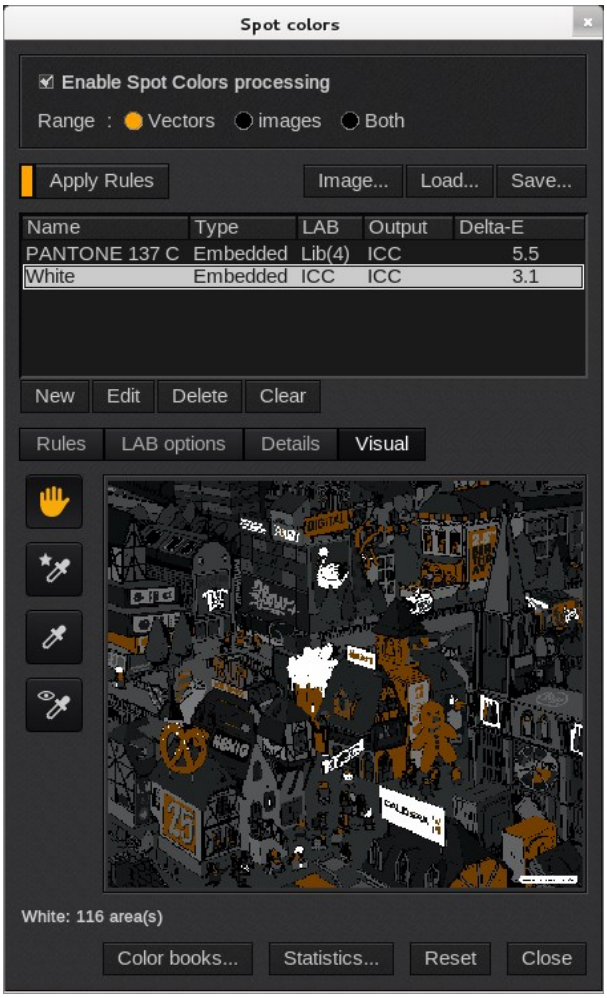


Note: The color is out of the monitor's gamut when a "!" is displayed. Be cautious when using a simulation of color on a screen. Accurate color reproduction is achieved when your monitor is calibrated and is using a high quality profile. Also the output LAB values are only an estimate and rely on the quality of the output profile for accuracy.

The Visual tab

The Visual tab displays the image and allows you to make some spot color modifications.

When you select a spot color from the list, it is highlighted in the image preview. In the bottom left corner, the name of the spot color appears and it lists the number of zones where the spot color appears.



Edit tools

 Zoom icon: zooms in and out of the image. Use the left button on your mouse to zoom in, the right button to zoom out, and the middle button to move the image.

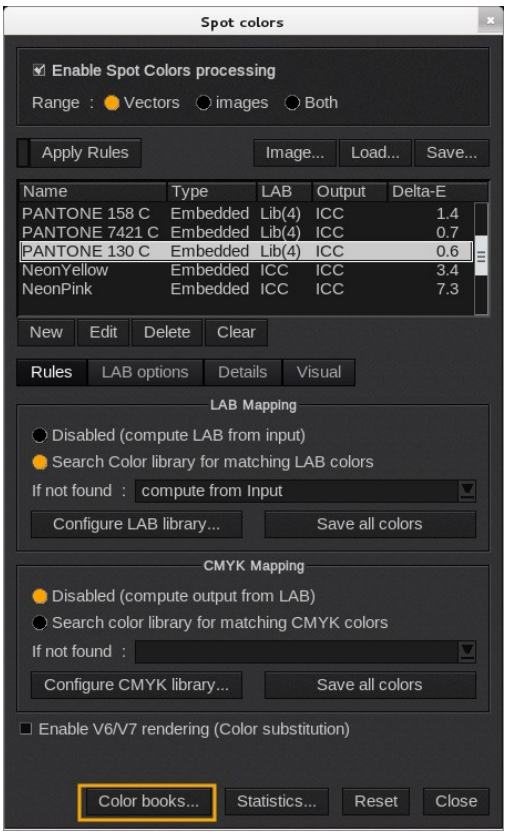
 Create a spot color icon: creates a spot color. Use the eyedropper to select a color on the image. The new spot color is created with its CMYK values as its name.

 Edit a spot color icon: edits a spot color. First select a spot color from the list and then click on the eyedropper. Then click on a color in the image. The selected spot color will take on the values of the color selected from the image.

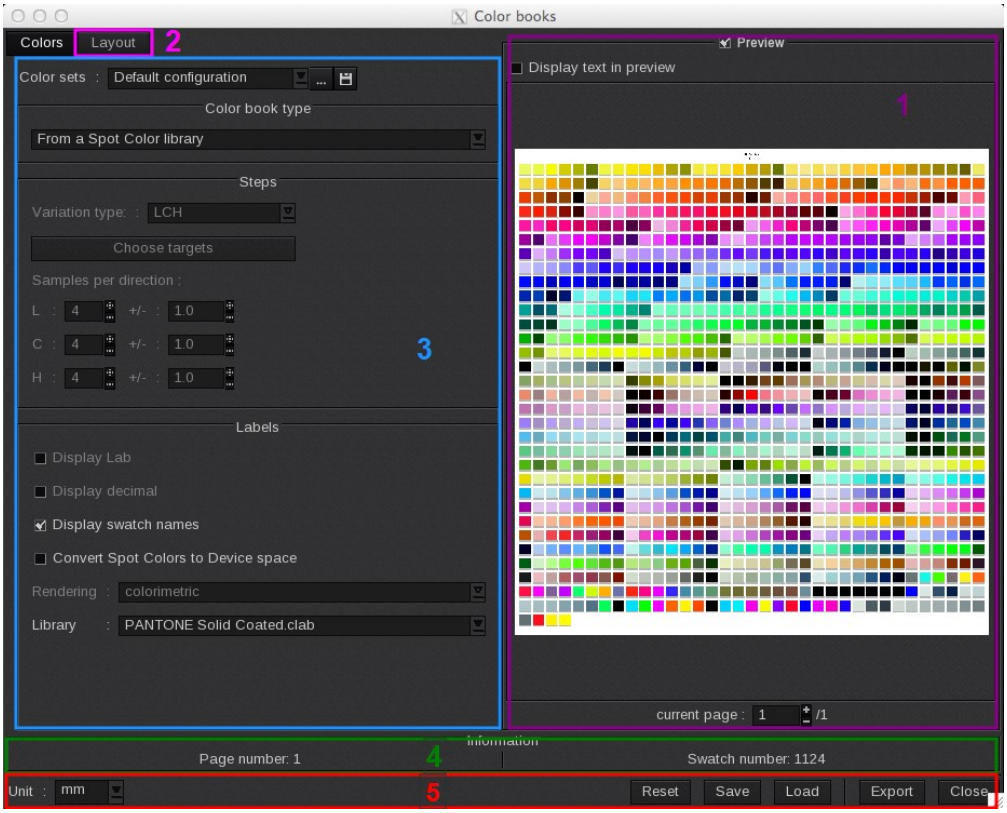
 Identify a spot color icon: identifies a spot color. Use the eyedropper to click on a color in the image. If the color selected corresponds to a spot color, then the spot color will become highlighted in the list. If the color selected in the image does not correspond to a spot color, then a message will appear indicating there is no matching spot color.

ColorBooks

From the *Spot colors* window click on the ***Color books...***button to open the *Color books* window.
When generating a ColorBook, the printing configuration is important, especially the print mode (CMYK, CMYKcmk, CMYKOG, RGB, etc.) and, for some ColorBooks, the ICC profile. Be careful to check the current printing configuration before you open the *Color books* window.



Main window

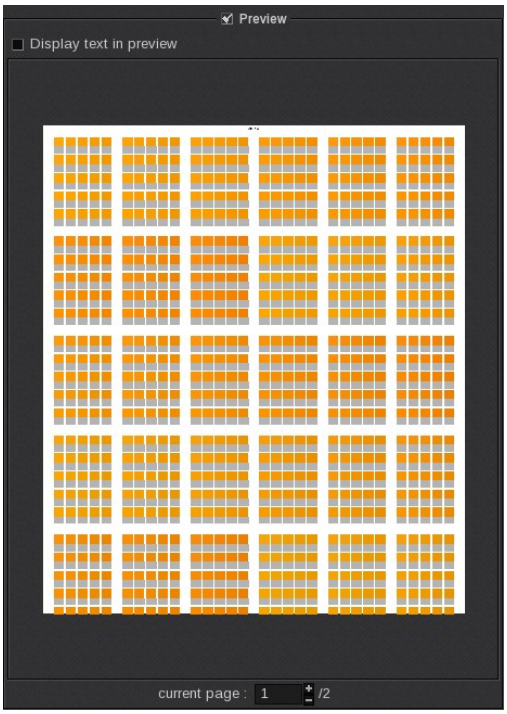


The **Colorbook** main window is divided into five sections:

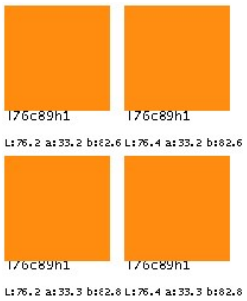
1. The Preview
2. The ColorBook selection or Colors tab including:
   - ColorBook type
   - Steps
   - Labels
2. The page setting or Layout tab including:
   - Title
   - Page
   - Swatches
4. The Information area.
5. The actions including the **Unit** of measurement and five action buttons: ***Reset***, ***Save***, ***Load***, ***Export*** and ***Close***.

Preview

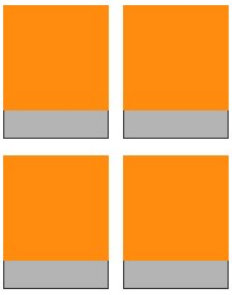
The **Preview** displays the ColorBook at a low resolution. The rendering is dynamic so changes are automatically reflected in the preview. The **Preview** is enabled by default and the checkmark appears next to the field.



- **Display text in preview**: when enabled labels are displayed. This feature is deactivated by default to generate previews more quickly. Therefore, it is not recommended to activate it for full ColorBooks. When it is deactivated, the text area is shown as a grey rectangle.



Labels displayed.



Labels deactivated.

This option applies only to labels. The title and the header are displayed in all cases.

- **Current page**: Use the arrows to navigate to a different page or manually enter the page number into this field.
  - Roll mode: The preview automatically divides a Colorbook being printed in roll mode into several sections to ensure the preview feature still works. The number of sections is indicated by a fraction. For example, 1/3 indicates that the first of three sections is being displayed in the preview. In the final print, the color swatches will be on the same document.

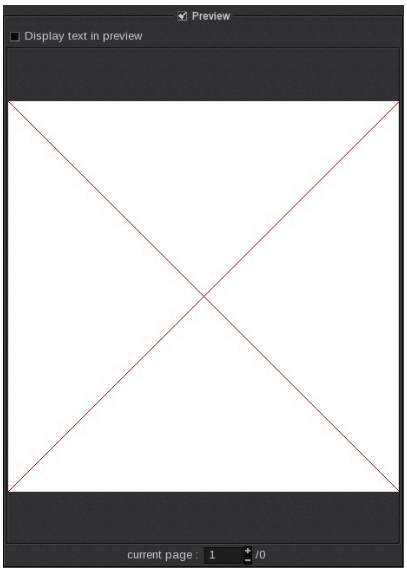
The following actions are available in every Caldera RIP preview module:

- **Zoom in**: press the Ctrl key and the right button on the mouse to zoom in. Alternatively you can press the Ctrl key and scroll up using the mouse.
- **Zoom out**: press the Ctrl key and the left button on the mouse to zoom out. Alternatively you can press the Ctrl key and scroll down using the mouse.
- **Scroll the image**: press the Ctrl key while pressing the mouse scroll to move the image in the preview.

These actions can also be used in the **ColorBook**, in the **Display** and the **Print** module under *Page Setup*.

Note: Unlike other modules, you cannot use Alt + R keys to reset the preview.

Red cross display

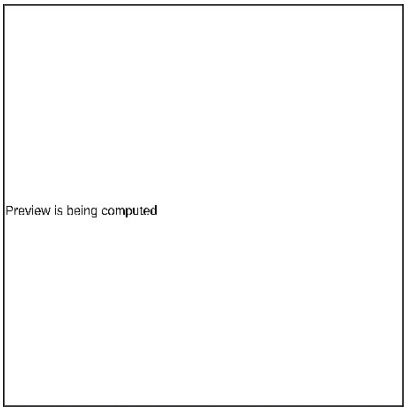


A red cross indicates that a ColorBook cannot be generated. This may be caused by:

- The ColorBook type is “from a spot color library” and the selected library is empty.
- The size of swatches is larger than the print area so no swatch can be placed on the media.
- There are too many swatches.

Preview computing message

A large ColorBook may take awhile to appear in the preview. When the message *Preview is being computed* appears, the cursor cannot be used.

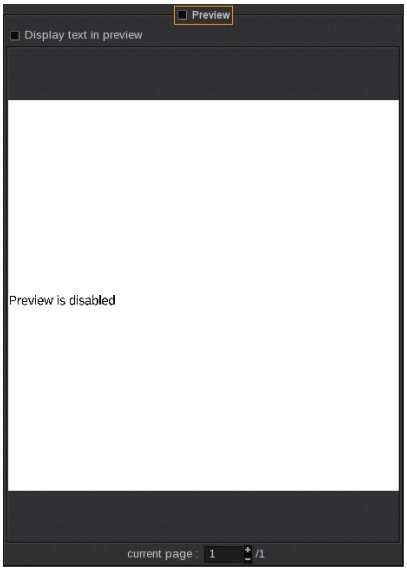


Preview is being computed

Preview disabled message

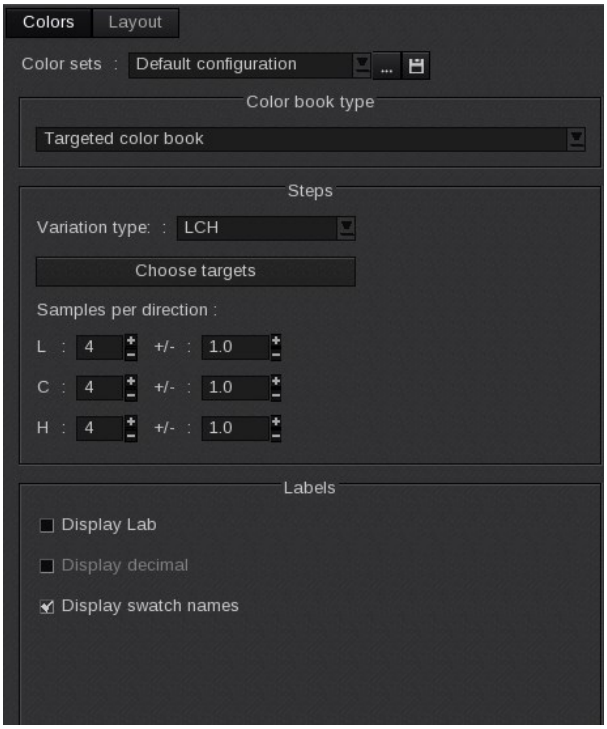
To disable the **Preview**, uncheck the box next to the field in the window. The message *Preview is disabled* will appear when the **Preview** has been disabled. The **Preview** is enabled by default.

It is useful to disable the preview when making several changes to parameters. Make all of your changes and then enable the feature to view your changes in the **Preview** window.

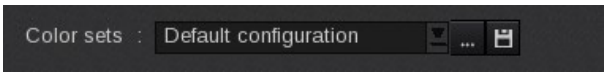


Colors tab

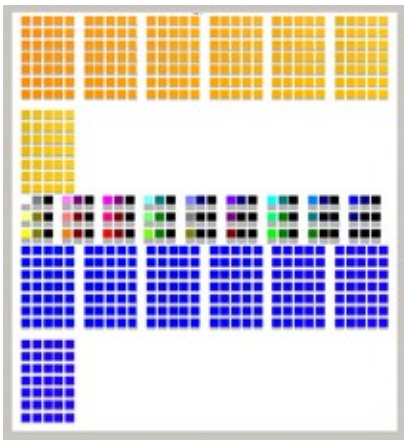
The Color tab is divided into four sections: **Color sets**, **Color book type**, **Steps**, and **Labels**.



Color sets

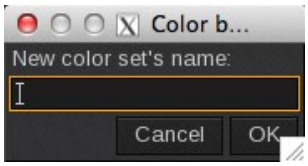


This feature allows you to define several color sets to be incorporated into the current ColorBook. When printed, the document will contain all defined ColorBooks. The preview will automatically update and reflect the additional ColorBooks.



Add and save

To add a custom color set to the list, click on the floppy disc icon and assign a name to the color set.



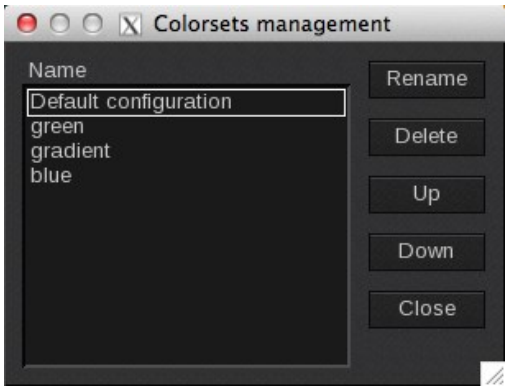
Two things happen when you add a new ColorBook to the list:

- The current ColorBook is saved with the name indicated in the **Color sets** field.
- A new ColorBook is added at the end of the list with the assigned name and the current values.

Note: When you select a ColorBook from the list and make changes, those changes are automatically saved.

Sort

To sort your **Color sets** list, click on the ***[...]*** button. The *Color sets management* window opens.



From this window you can: ***Rename*** the selected ColorBook, ***Delete*** it, move it ***Up*** or***Down*** the list or ***Close*** the window. The order of the ColorBooks in the list is important because this determines their order in the preview.

Color book type

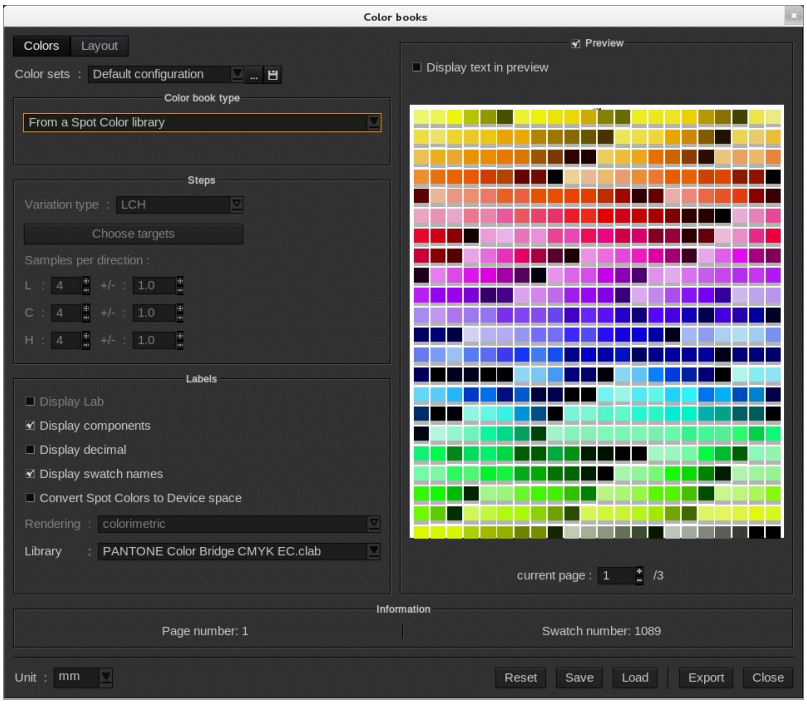
The four types of ColorBooks are:

- **From a Spot Color library**: the ColorBook will be made from the selected library's spot colors only.
- **Targeted ColorBook**: the ColorBook focuses on a Targeted Color selected within the document's spot colors. To help you choose the right components percentage for the target, it will vary the components around the colors.

- **Full ColorBook**: the ColorBook is generated from the printer's full color gamut.
- **Gradient ColorBook**: the ColorBook will display a gradient between two selected colors.

Once a **Color book type** selection is made the **Steps** and **Labels** options will change accordingly.

From a Spot Color library

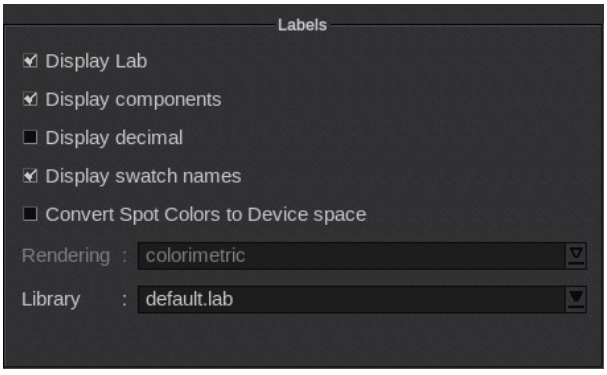


When **Color book type** is set to **From a Spot Color library** the ColorBook utilizes the parameters in the Spot Color library. It can be a HKS, NCS, Pantone, PPG, RAL or a personalized library created in the **Spot Color management** section. The PDF created contains all colors in the order as specified in the library. The colors are placed by following the order in which they are listed.

Steps

Unsupported options. All options are grayed out because the option selected prints an exact Spot Color library.

Labels



The **Labels** area allows you to define the information that will be reflected on the PDF label for each swatch.

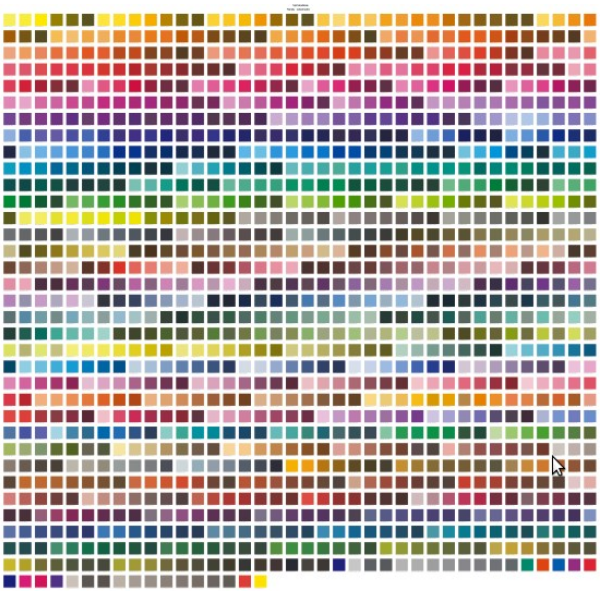
- **Display Lab**: displays the LAB components when they are available. If the selected library has the .clab extension it means that it is encrypted and that the LAB components are not available. In this case, the checkbox is grayed out.
- **Display components**: displays the value of each ink as a percentage.
- **Display decimal**: displays the LAB components with the first decimal when available.
- **Display swatch names**: displays the swatch name of the library.

- **Convert Spot Colors to Device space**: converts the colors into the device space defined by the ICC profile. When enabled, the colors no longer refer to the Spot Colors and the ColorBook must not be used with another printing configuration to keep its colorimetric meaning.

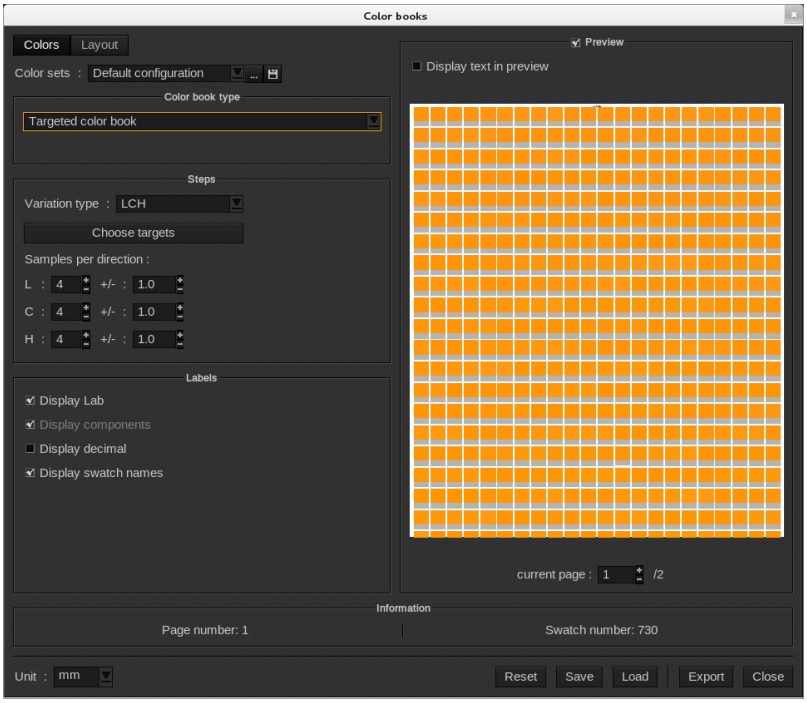
When **Convert Spot Colors to Device space** is disabled, the swatches keep the library colorimetric information and the Spot Color management has to be used when the ColorBook is printed. In that case, the PDF file created contains the entire library of Spot Colors that is recognized by **Caldera RIP** as true Spot Colors.

- **Rendering**: choice of the ICC rendering used when the Spot Colors are converted. The possibilities are: *perceptual*, *colorimetric*, *saturation*, *absolute*, *opt. colorimetric* (optimized) and *opt. absolute* (optimized). The selected rendering is automatically added to the header.
- **Library**: choice of the Spot Colors library from which the ColorBook will be created. The libraries list is obtained from the *Spot Color* management window.

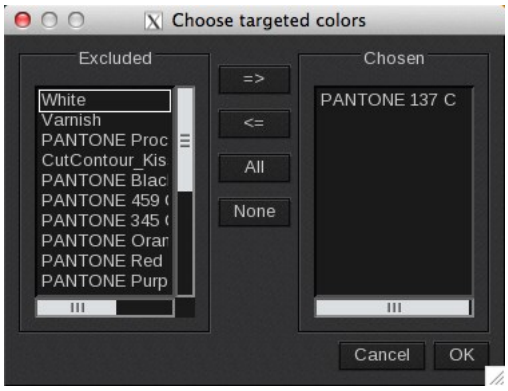
Example:
In the example below the PANTONE Solid Coated.clab library has been selected. The spot colors have been converted into the device space. Here is the result:



Targeted ColorBook



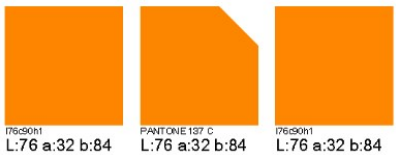
When the **Color book type** is set to **Targeted color book**, it takes into account the value of the spot color(s) selected under the selected target area which is accessible by pressing the ***Choose targets*** button.



The colors available are the ones included in the document or added in the spot color window by the user.

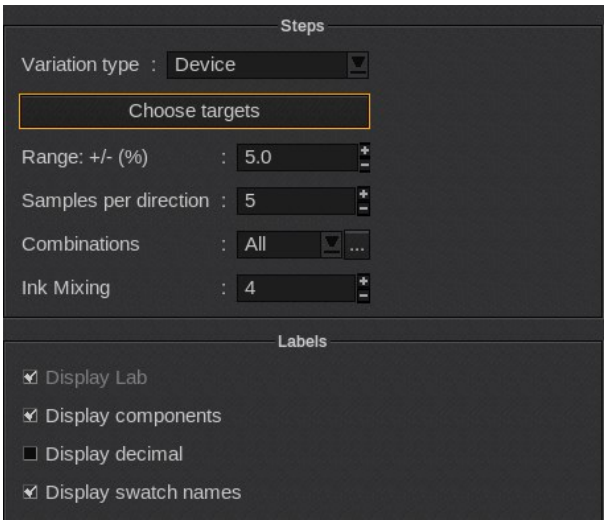
Steps

Once the colors have been selected, two **Variation types** are available in the Steps section: **Device** and **LCH**. In both modes, the swatch of the targeted color appears with a clipped corner in the created PDF.



The clipped corner is only visible in the PDF file and not available in the preview.

Device variation mode



When the **Variation type** is set to **Device** mode it takes into account the ink value used by the profile to reproduce the color. It will then make variations based on this value.

Steps

The following options appear under the Steps section when the **Variation type** is set to **Device**.

- **Range**: +/- (%): maximum value of the ink variation. To get the global variation: add the range to the initial value and you will get the maximal ink value; subtract the range to the initial value and you will get the minimal ink value. Over 100% and under 0% samples will not be created.

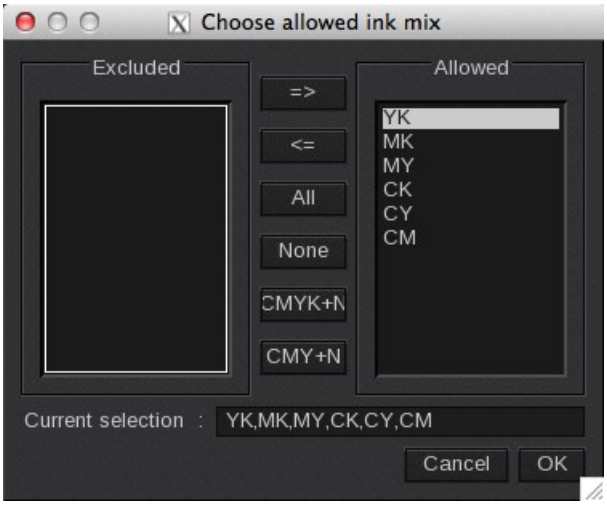
Example: If the initial value of ink is 35% and the range is 4.0, then the samples will be between 31% and 39%. This calculation is applied to each ink.

- **Samples per direction**: the number of samples determines how many intermediate values will be created between the initial value and the one of its limit. The values are regularly placed with the same distance between them.

Example: Keep the same initial value: 35% and the same limits: 31% and 39%. Select 2 as the number of samples per direction. You will have 31% and 33% for the lower values and 37% and 39% for the higher ones. So this ink will take the following values: 31%, 33%, 35%, 37% and 39%.

The number of samples do not provide the total number of swatches but only the number of values an ink can achieve. The total number of samples will depend on the number of ink mixing too.

- **Ink Mixing**: number of inks that can be mixed at the same time and according to the defined **combinations**.
- **Combinations**: choice of the inks that will be able to vary from their initial value mixed with another ink. Clicking the ***[...]*** button opens the *Choose allowed ink mix* window.



By default, all combinations are allowed. Several actions are available:

- **Excluded** and **Allowed**: these columns indicate the ink mix that will be excluded or allowed. The arrows allow you to move one combination from one column to the other.

If inks such as Orange and Green are defined for the current profile, all combinations that can be made with them will also be available.

- ***All*** selects all combinations while ***None*** deselects them.
- ***CMYK + N***: all CMYK and NColor ink combinations are selected whereas NColor only combinations are not.

Example: if the mode is CMYKOG: CM, CY, CK, CO, CG, MY, MK, MO, MG, YK, YO, YG, KO, KG will be selected whereas OG will not be selected.

- ***CMY + N***: all CMY and NColor ink couples are selected whereas only Ncolor couples are not selected.

Example: if the mode is CMYKOG: CM, CY, CO, CG, MY, MO, MG, YO, YG will be selected whereas CK, MK, YK, KO, KG, OG will not be selected.

- **Current selection**: shows the current selection. The desired ink mix can be manually entered here using capitals and the combinations will automatically be calculated. Couples, triplets, or quadruplets can also be entered divided with a space, a coma, or a "/".
- ***Cancel***: closes the window without saving the changes.
- ***OK***: saves the changes and then closes the window.

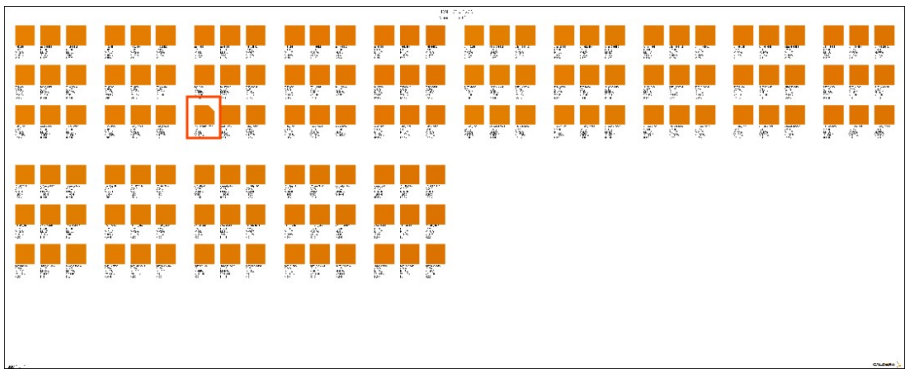
Labels

The following options appear under the Labels section when the **Variation type** is set to **Device**.

- **Display Lab**: unsupported option.
- **Display components**: displays the value of each ink as a percentage.
- **Display decimal**: displays the value with the first decimal.
- **Display swatch names**: for the initial color: it's named as the assigned color in the spot color management window. For the other swatches, it's named for its component values.

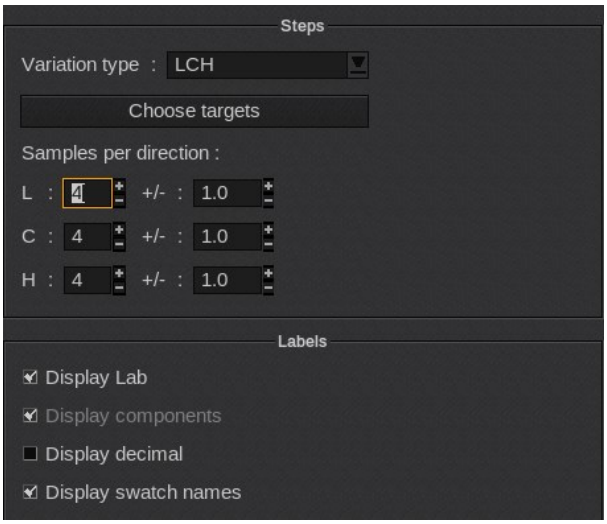
Example

We choose the Pantone 137C for this example with a CMYK mode. The range has been set up at 2.0% and the number of samples is 2. The max ink mixing is at the maximum.
Here is the result:



- The sample with the clipped corner is the target color
- The number of samples that have been created is not the maximum that could have been reached with another color. For this example the black ink was at 0% so it could only vary with higher values. Applying the same principle the cyan ink was initially at 1.2 so it could have taken only one lower value and the yellow ink was at 99.9% so it could only vary with lower values.

LCH variation mode



When the **Variation type** is set to the **LCH** mode, the targeted color LAB values are obtained from the ICC profile and are then converted into LCH to allow the user to create variations of the LCH value.

Steps

The following options appear under the Steps section when the **Variation type** is set to **LCH**.

For the three following fields, the first number corresponds to the maximum number of variations that will be created above and under the initial value. So if you choose 4, the component will take 9 values: 4 above, the initial value and 4 under. If a limit is reached, the following variations will not be created.

- **L**: "Lightness" value in positive units from 0 (black) to 100 (white).
- **C**: "Chroma" value in positive units from 0 (gray) to 100 (maximal saturation).
- **H**: Hue value in degree and representing a hue from the color wheel. The value can be from -359 to 359, the limit is 360. If a higher number is entered, it will automatically change to 360.

When "Make packs" is selected in the swatches area under the Layout tab, the pack creation follows these rules:

- L values vary from one column to the next one so the number of columns in each pack depends on the number of L values.
- C values vary from one line to the next one so the number of lines in each pack depends on the number of C values.
- H values vary from one pack to the next one so the number of packs depends on the number of H values.

Labels

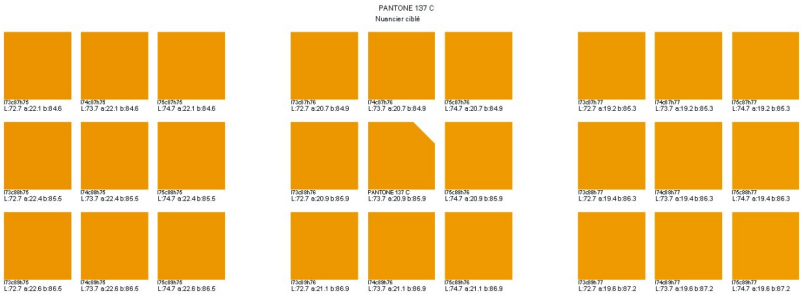
The following options appear under the Labels section when the **Variation type** is set to **LCH**.

- **Display LAB**: displays the LAB value of each swatch.
- **Display components**: unsupported option.
- **Display decimal**: displays the value with the first decimal.
- **Display swatch names**: for the initial color: it's named as an assigned color in the spot color management window. For the other swatches: it's named as its LCH value.

Example

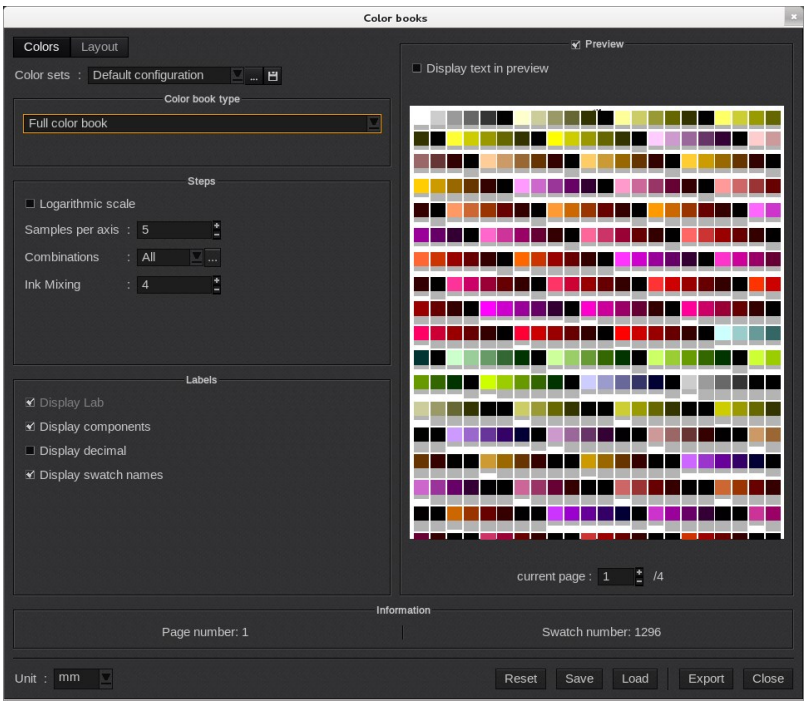
We choose a CMYK mode and the Pantone 137C as targeted color.
The number of L values is 1 with a 1.0 distance.
The number of C values is 1 with a 1.0 distance.
The number of H values is 1 with a 1° distance.

Here is the result:



- The sample with the clipped corner is the target color: Pantone 137C.
- L variations are on the columns, C variations on the lines and the H ones on packs.
- Values are displayed with the first decimal to get a higher precision.

Full ColorBook



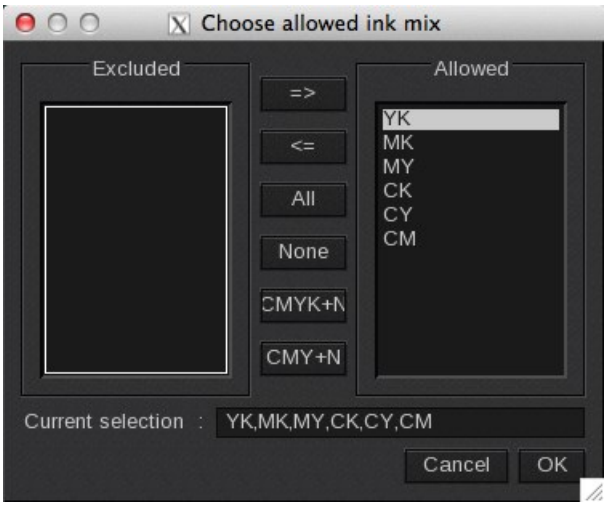
When the **Color book type** is set to **Full color book**, it generates a full ColorBook. No particular ink restriction is made and the number of swatches and the number of inks mixed are defined in the Steps area. The Labels area allow you to specify the information displayed in the **Swatch** labels.

Steps

When the **Color book type** is set to **Full color book**, the following Steps options appear.

- **Logarithmic scale**: adds a logarithmic scale to the sample creation. The ink variations are more gradual and give priority to light tones.

- **Samples per axis**: the number of samples determine how many intermediate values will be represented between the initial value and its limit. The values are regularly placed with the same distance between them. The initial value is 0% and the limit is 100%
- **Ink Mixing**: the number of inks that can be mixed at the same time according to the defined **combinations**.
- **Combinations**: choice of the inks that will be able to vary from their initial value mixed with another ink. Clicking the ***[...]*** button will open the *Choose allowed ink mix* window.



By default, all combinations are allowed. Several actions are available:

- **Excluded** and **Allowed**: the available column indicates the ink combinations that will not be used. The arrows move one combination from one column to the other.

  If ink such as Orange and Green are defined for the current profile, all combinations that can be made with them will also be available.

- ***All*** selects all combinations while ***None*** deselects them.
- ***CMYK + N***: all CMYK and NColor ink combinations are selected whereas only NColor combinations are not.

  Example: if the mode is CMYKOG: CM, CY, CK, CO, CG, MY, MK, MO, MG, YK, YO, YG, KO, KG will be selected whereas OG won't be selected.

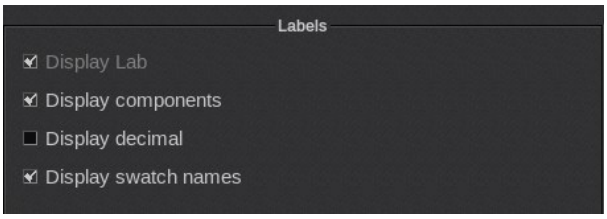
- ***CMY + N***: all CMY and NColor ink combinations are selected whereas only NColor combinations are not.

  Example: if the mode is CMYKOG: CM, CY, CO, CG, MY, MO, MG, YO, YG will be selected whereas CK, MK, YK, KO, KG, OG won't be selected.

- **Current selection**: shows the current selection. The desired ink can be manually entered here and the combinations will automatically be calculated. Couples, triplets, or quadruplets can also be entered with a space, a coma, or a "/".
- ***Cancel***: closes the window without saving the changes.
- ***OK***: saves the changes and then closes the window.

Labels

When the **Color book type** is set to **Full color book**, the following Labels options appear.

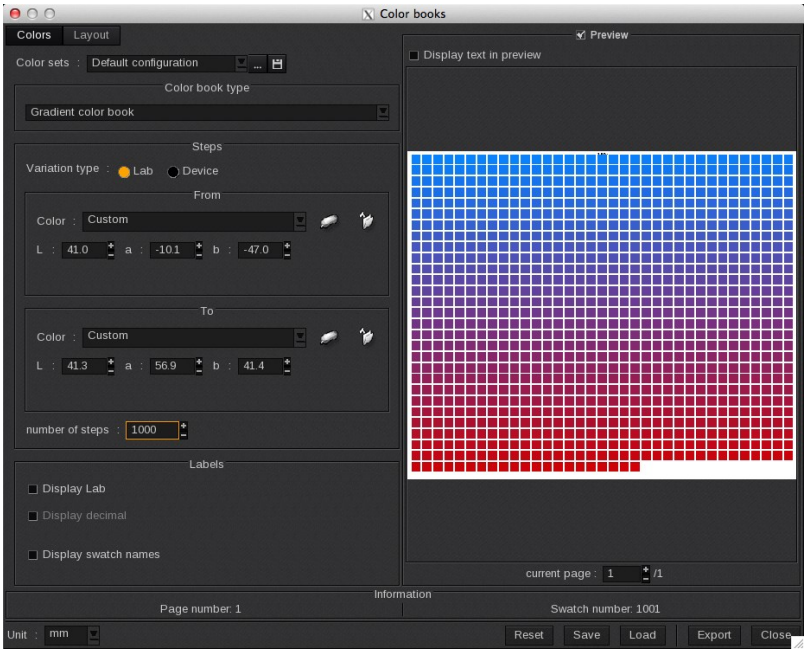


- **Display Lab**: unsupported option.
- **Display components**: displays the value of each ink as a percentage.
- **Display decimal**: displays the value with the first decimal.
- **Display swatch names**: the swatch's name is its component values and is rounded to the nearest unit.

Examples:
For the first example, the number of samples is 5 and the max ink limit is selected. Swatch names and components are both displayed.

For the second example, the number of samples and the max ink limit are the same. The logarithmic scale is enabled.

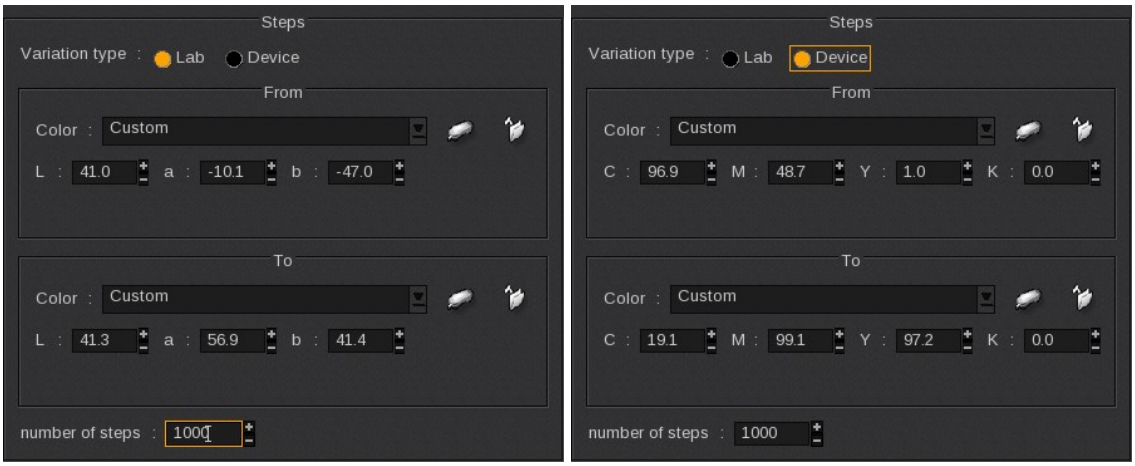
Gradient ColorBook



When the **Color book type** is set to **Gradient color book**, the ColorBook utilizes a starting and a finishing color to create a gradient.
The number of swatches and the two colors are defined in Steps section. The Labels area allows you to define information displayed in the swatch label.

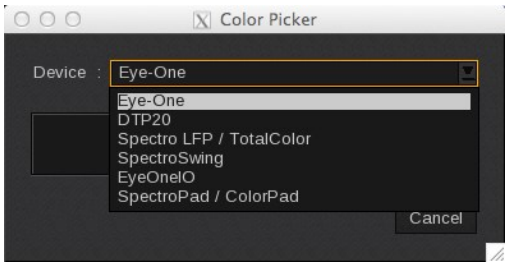
Steps

When the **Color book type** is set to **Gradient color book**, the following Steps options appear.

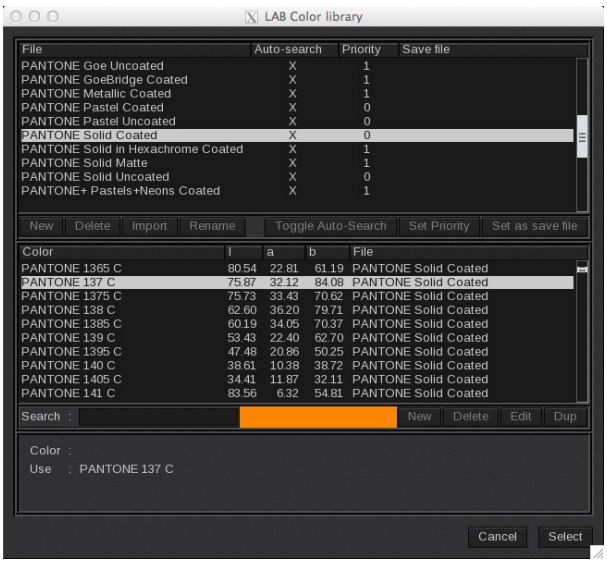


Two Variation types exist: Lab or Device. The only relevant change between them is the color space used to define the colors: LAB space or the device space which is CMYK here but can also be CMYK+N with additional colors.

- **From**: sets the starting color that will be at the top of the ColorBook.
- **To**: sets the finishing color that will be at the bottom of the ColorBook.
- **Color**: choose the color among the image's Spot Color or:
  -  : Select the spectrophotometer icon to measure the starting or finishing colors with one of the supported spectrophotometers.



  -  : Select the folder icon to search for the starting or finishing colors in the available spot color libraries.



  - Alternatively you can manually enter the values (CMYK+N or Lab) for the starting and finish colors.
- Once you set the **From** and **To** colors, you can indicate the number of swatches to create between the two colors in the **number of steps** field.

If the colors are identical or very close, the number of steps or swatches might be automatically reduced in the preview because only different color swatches are displayed.

The minimum number of steps allowed is 1 and this display only the **From** and **To** colors.

The ColorBook total number of swatches corresponds to “number of steps” +1.

The maximum is 100,000 steps which means your maximum number of swatches is 100,001.

Labels

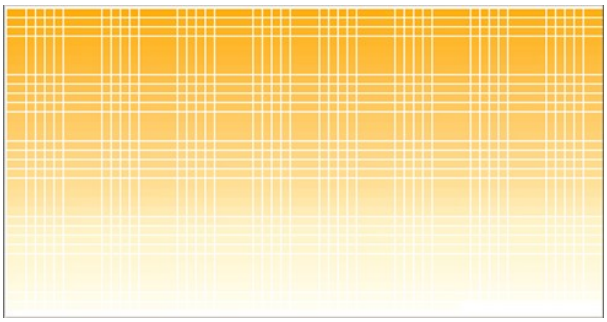
When the **Color book type** is set to **Gradient color book**, the following Labels options appear.

- **Display Lab / components**: displays the value of each ink as a percentage.
- **Display decimal**: displays the value with the first decimal.
- **Display swatch names**: the swatch is named with it's component values rounded to the nearest unit.

Examples:

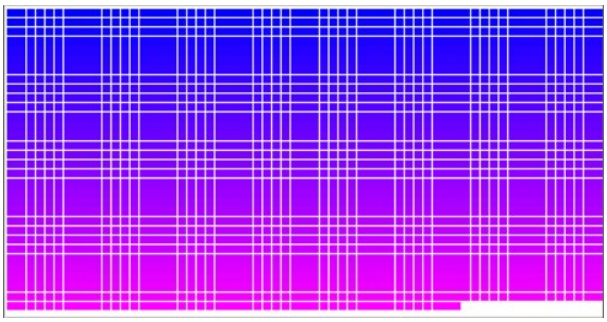
For the first example:

- Variation type is Lab
- From color: Pantone 137C
- To color: White
- Number of steps: 2000.



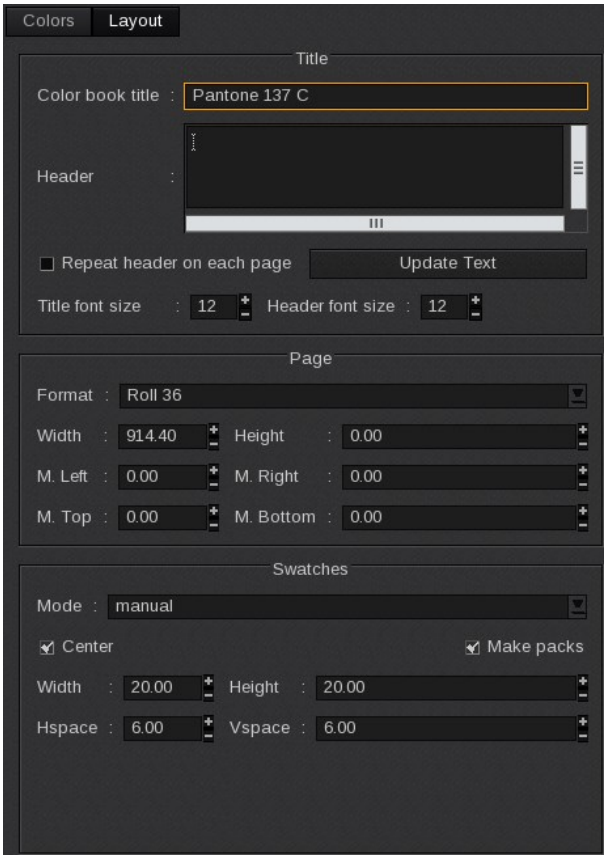
For the second example, the gradient is done from one color to another (not to the white like the previous example).

- Variation type is Device
- From color: Blue (C: 100%, M: 100%, Y: 0%, K: 0%)
- To color: Magenta (C: 0%, M: 100%, Y: 0%, K: 0%)
- Number of steps: 2000.

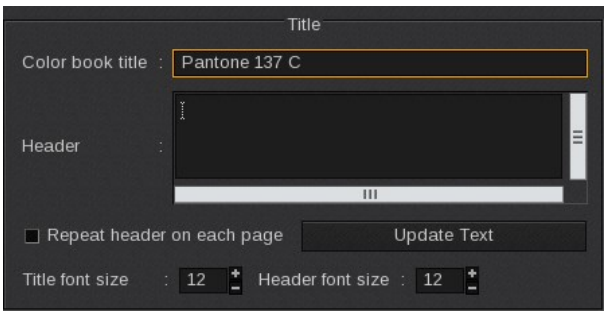


Layout tab

The Layout tab is divided into three sections: **Title**, **Page**, and **Swatches**.



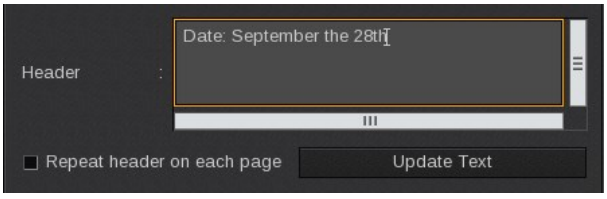
Title



The **Title** area allows you to add a title and a header to the ColorBook. This information appears on the top of the page and will center align. The title is automatically populated on each page of the ColorBook.

- **ColorBook title**: the information typed in this field is automatically saved and dynamically reflected in the preview. When the “Targeted ColorBook” has been selected, the name of the color selected in the Spot Color management window appears in the title field. In the other modes “MyColorBook” appears by default.
- **Title font size**: adjusts the title size and dynamically updates the preview.

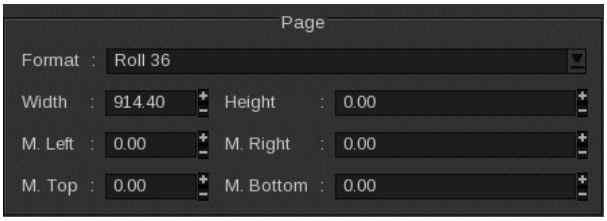
The **Header** allows you to include notes on the Colorbook without any character limitations. For example, you can include the date and additional comments in this field.



Click on ***Update Text*** to save the header text. Be aware that while the writing area is grey the text has not been saved yet.

- **Header font size**: adjusts the header font size dynamically.
- **Repeat header on each page**: when checked the header will be repeated on each page if the ColorBook has more than one page. When left unchecked, the header will appear only on the first page. In either case, the title will appear on all pages.

Page



The **Page** area allows you to manage the page size and margins of the ColorBook. All changes are dynamically reflected in the preview.

- **Format**: the available formats are listed here. The format listed first in the list is shown as the default selection. The format changes to "custom" when the width or height is modified.

When you change a value manually without using “+” and “-“ tools, press Enter to validate the modification. The grey field indicates that the changes have not yet been saved. This tip is true in all **Caldera RIP** modules.

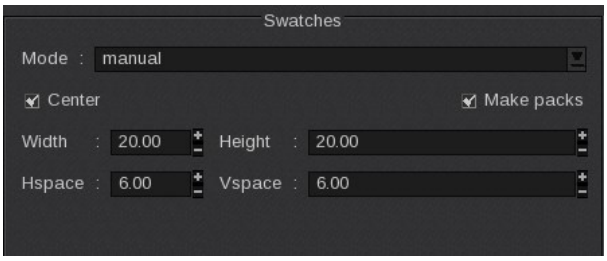
- **Width**: there is always a width of 1 for a minimum (mm or inch). By default, it takes the selected format value.
- **Height**: if the selected format is a roll, the height will stay at 0.00 meaning that there is no height defined. For a sheet, it takes its value.

If the selected format is a sheet, margins will be added on every sheet.

- **M. Left, M. Right, M. Top** and **M. Bottom** : the left, right, top and bottom margins are at 0.00 by default or take the selected format's value. They can be changed manually.

If the addition of all margins does not provide enough space to display one swatch, the preview becomes blank with a red cross and no ColorBook can be created.

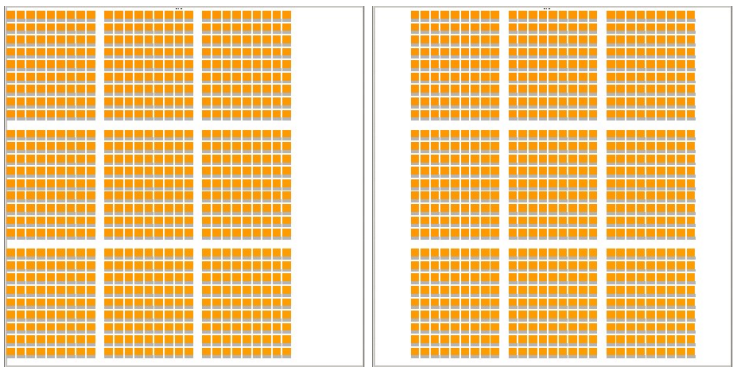
Swatches



The **Swatches** area sets up the swatch size and location on the page. All changes are automatically saved and dynamically reflected in the preview.
Three **Modes** are available:

- **Automatic**: in this mode the swatches are squares of 40.00 mm with 6.00 mm space between two swatches. Swatches are automatically centered and populated.
- **Compact**: in this mode the swatches are squares of 20.00 mm with 1.00 mm space between two swatches. Swatches are placed side by side to use minimal size on the media lengthwise.
- **Manual**: in this mode the user can define all settings:

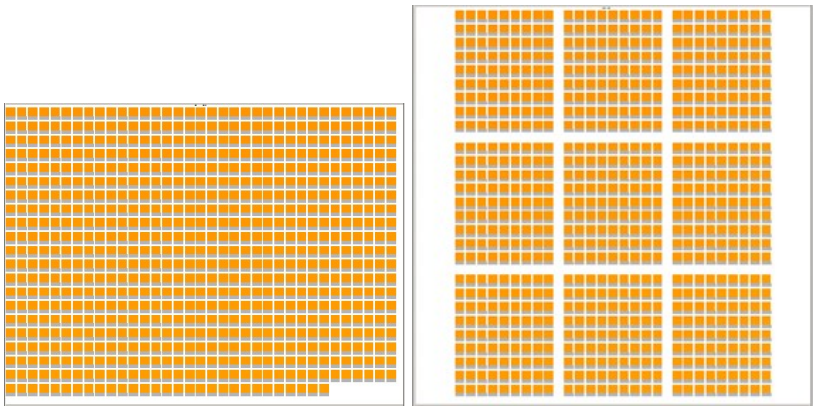
- **Center**: when enabled the swatches are centered on the page. When disabled the swatches are aligned to the left margin.



Example of two ColorBooks, one aligned to the left margin and one centered.

- **Make packs**: when enabled the swatches are regrouped by packs with a space of the size of a swatch between two packs. When left disabled the swatches are placed in compact mode.

Packs are blocks in which two components vary: one in the line and the other in the column. The others components vary from one pack to another. The pack size is determined by the number of variations and the number of swatches chosen for each component.



The image on the left is an example of compact mode. The image on the right is an example when **Make packs** is enabled.

- **Width** and **Height**: the swatch width and height is 20.00 mm by default. It must be between 5.00 mm (0.20 inch) and 999.00.

If the width and/or the height is larger than the printing area determined in the Page part, no swatch will be displayed. The preview becomes blank with a red cross and no ColorBook can be created.

- **Hspace**: horizontal space between two swatches. If the horizontal space is larger than the page width, only one swatch will be displayed per line.
- **Vspace**: vertical space between two swatches. If the vertical space is larger than the page height, only one swatch will be displayed per column.

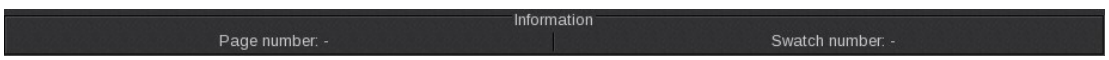
Hspace and Vspace are 6.00 mm by default and must be between 0.00 and 999.00.

Information

The **Information** area lists information about the current ColorBook. The information changes depending on the current parameters such as the layout or number of swatches. Two fields are displayed:

- **Page number**: displays the page number. If the page format is set to roll, the page number will always be 1.
- **Swatch number**: this field displays the number of swatches in the ColorBook.

If "-" appears in one or both fields that means an error occurred and no ColorBook will be created.



The most common reasons for errors are:

- The number of pages is too big (larger than 10 000).
- The page format is too small to contain even one swatch.
- In **Targeted ColorBook** mode: no color has been selected in the *Spot Color management* window.
- In **From a Spot Color library** mode:
  - The chosen library does not contain any color.
  - No ICC profile has been activated for the current device (in this case, an error message will be displayed before the ColorBooks generator window opens).

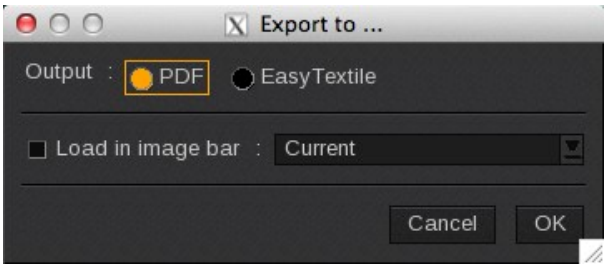
Actions

The **Actions** area displays the following options:

- **Unit**: defines the unit of measurement in millimeter or inches.
- ***Reset***: resets to the default settings.
- ***Save***: saves the current configuration and opens the file selection window.
- ***Load***: loads a saved configuration using the file selection window.
- ***Export***: exports the ColorBook. See the following section for additional details.
- ***Close***: closes the window.

Export

To export the ColorBook as a PDF file, click on ***Export*** and the following window opens:



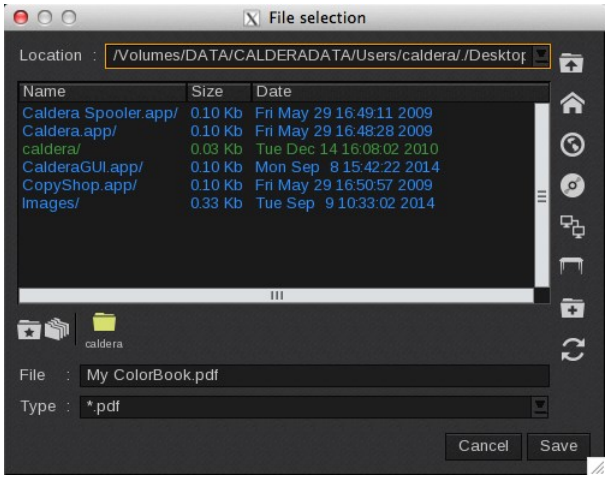
The **EasyTextile** import option is not used anymore.

The **PDF export** option exports a file created with the ColorBook generator and is locked with a password so it can only be used with Caldera RIP. The PDF generated cannot be opened with a PDF viewer.

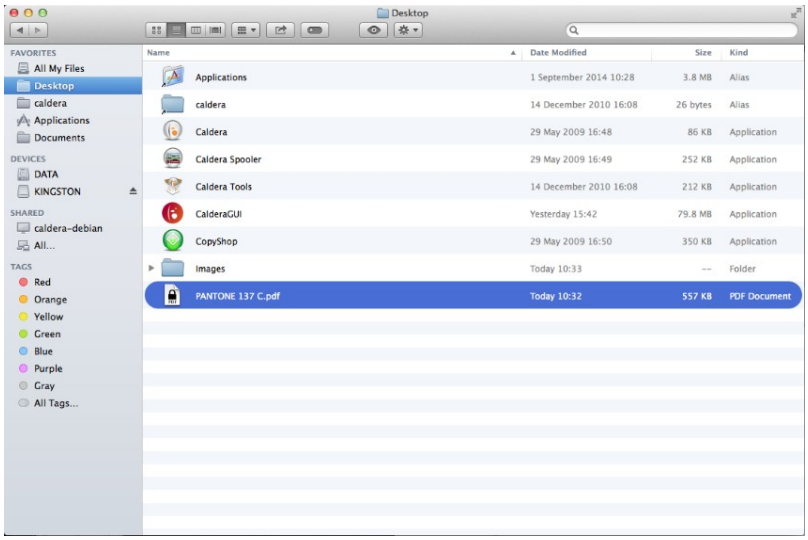
When a ColorBook is created from a spot color library without the conversion to device space, the Spot Color encapsulated into the PDF document will keep the library's colorimetric information. APPE detects and interprets them through the profile during the printing process. The Spot Color management has to be enabled.

Once you have set all parameters for your ColorBook, follow these steps to export it as a PDF file:

1. Click on the ***Export*** button. The *Export to...* window opens
2. Select **PDF** then click ***OK***. The *File selection* window opens:



3. By default the ColorBook title is used for the **File** name. It can be changed in the **File** field.
4. Browse to the location where you want to save the file using the available options in the *File selection* window.
5. Then click on ***Save***.
6. Your ColorBook is now saved to your specified location.



Automatic load in the ImageBar

By enabling the **Load in image bar** option, you can export the ColorBook to the PDF format and then open it automatically in the selected tab.

You can even create a new tab by writing its name directly in the **Tab** field. After clicking ***OK***, the new tab will be added to the **ImageBar** and the PDF will be saved to the newly created tab.

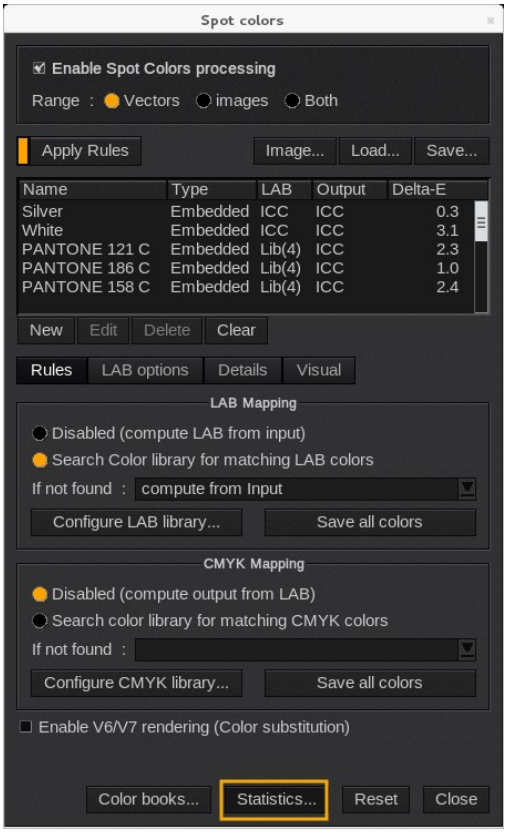
If the PDF has several pages, each page is saved as shown in the screenshot below. The first page will not show a page number and the following pages will show "_p2; _p3; _p4; etc,".

The PDF generated in the image bar has a size constraint. It cannot be larger than 13MB (it will be 10MB on average). This size constraint applies only to the preview image. For large ColorBooks, the preview will have a very low resolution. For example, the dpi will only be 36 dpi for a full ColorBook.

To achieve a higher preview resolution, use the **Export to PDF** option. You will also be able to select the preview resolution in **Fileman**. Warning: The higher the resolution, the larger the preview file size.

Statistics

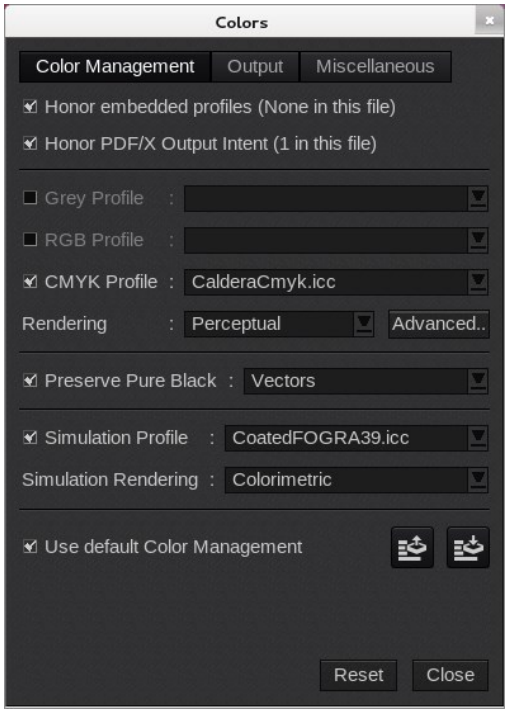
From the *Spot colors* window click the ***Statistics...***button to open the *Statistics* window.



The *Statistics* window displays a few statistics about the spot colors in the image.

- **Number of colors**: the number of spot colors in the image.
- **Average delta-E**: average delta-E of these colors.
- **Best 90%**: average delta-E of the 90% of colors that most accurately match the desired spot colors.
- **Worst 10%**: average delta-E of the 10% of colors that least accurately match the desired spot colors.
- **Worst color**: highest delta-E.
- ***Close***: closes the window.

Colors



This window has three tabs:

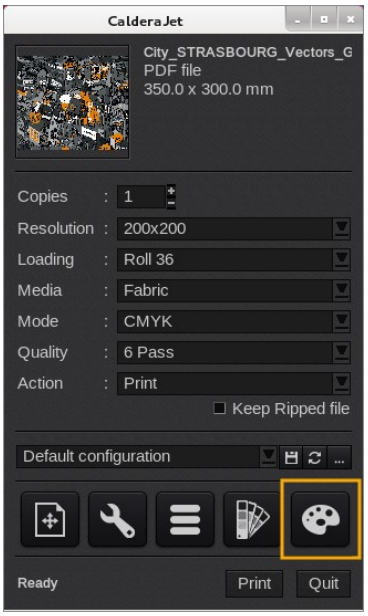
- Color Management: mainly manages the input profiles.
- Output: manages the output profiles.
- Miscellaneous: manages other elements linked to the color management.

Two buttons are available at the bottom of the window:

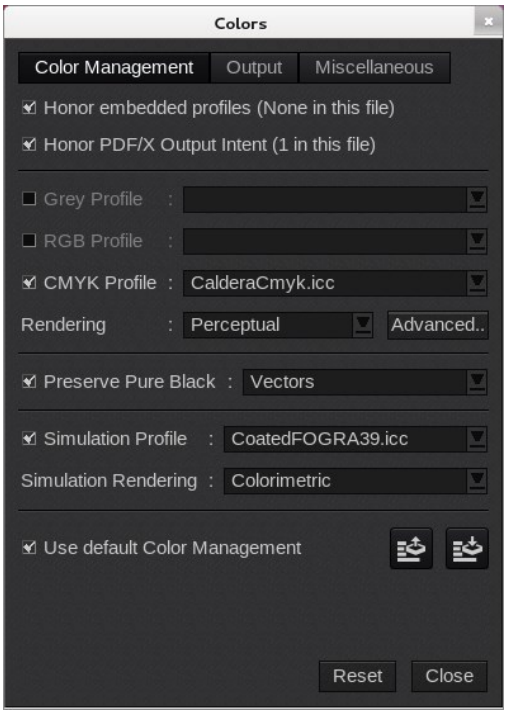
- ***Reset***: erases the custom configuration to set the default one as it is in the **Color Configuration** module.
- ***Close***: closes the window. Changes are automatically saved.

Open the Colors window

Click on the fifth icon button of the **Print** module main window.

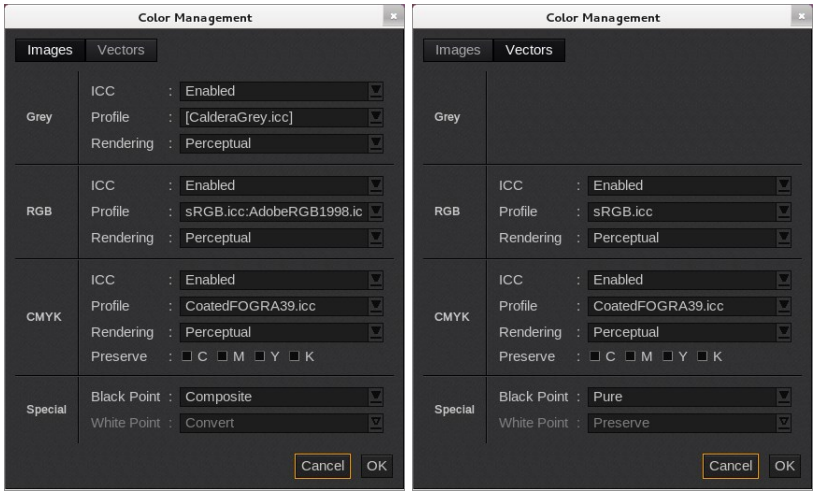


Color Management tab



This tab is a copy of the Color Management tab of the **Color Configuration** module. It allows you to change the profiles used before printing.

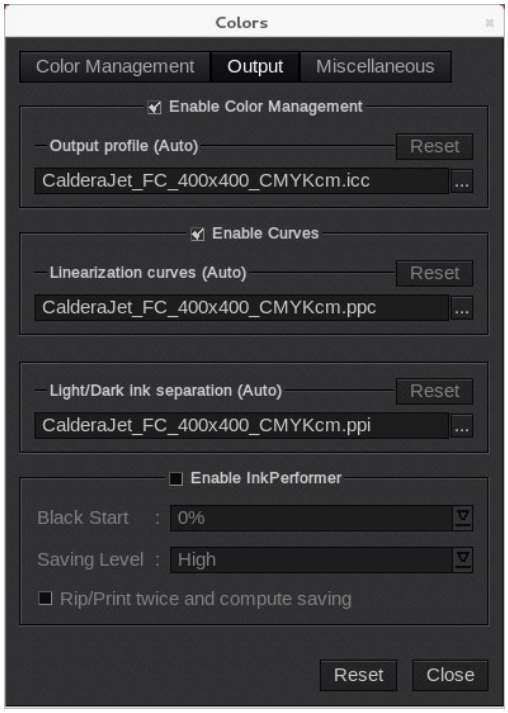
- **Honor embedded profiles**: uses the profiles contained in the image if there are any. This is used as input profile.
- **Honor PDF/X Output Intent**: uses the PDF/X Output Intent embedded in the file if there are any.
- **Grey Profile**, **RGB Profile** and **CMYK Profile**: sets the profile to use for input if **Honor embedded profile** is not active and/or there is no embedded profile in the file. Depending on the image's elements, you will not be able to act on all the profiles.
- **Rendering**: sets the input profile rendering option. You can choose among: *Perceptual*, *Colorimetric*, *Colorimetric+BPC*, *Saturation* and *Absolute*.
- ***Advanced...***: opens the following window. The Images and Vectors tab are identical. Each one sets the color management for their elements: rasters (images) or vectors. Depending on the image loaded in the **Print** module, only some parts of the window will be displayed.



- **ICC**: enables or disables the ICC rendering for this type of object.
- **Profile**: sets the ICC profile that is to be applied to the image.

  - **Rendering**: sets the ICC rendering intent for the conversion. You can choose among: *Perceptual*, *Colorimetric*, *Colorimetric+BPC*, *Saturation* and *Absolute*.
  - **Preserve** (CMYK areas only): allows you to disable the ICC conversion for colors made of one ink only.
  - **Black Point**: sets whether input black should be printed using all four inks (*Composite*) or only black ink (*Pure*).
  - **White Point**: available for *Absolute* **Rendering** only. You can choose whether to *Preserve* the White point or not (*Convert*).
- **Preserve Pure Black**: allows you to print pure black with black ink only. Otherwise, a composite black is used. When enabled, choose for which elements it applies: *Vectors*, *Images* or *Vectors+Images*.
- **Simulation Profile**: You can simulate a media for another media, with one condition: the destination gamut must be larger than the simulated one. Enable this feature to apply a simulation profile to your image, then select the profile.
- **Simulation Rendering**: rendering intent for the conversion from the simulation space to the final device space. Should be Colorimetric (with or without BPC) or Absolute.
- **Use Default Color Management**: does not take into account the current window settings and applies the global color management settings instead.
-  : loads a saved color management configuration (.cmo file).
-  : saves the settings in a color management configuration (.cmo file).

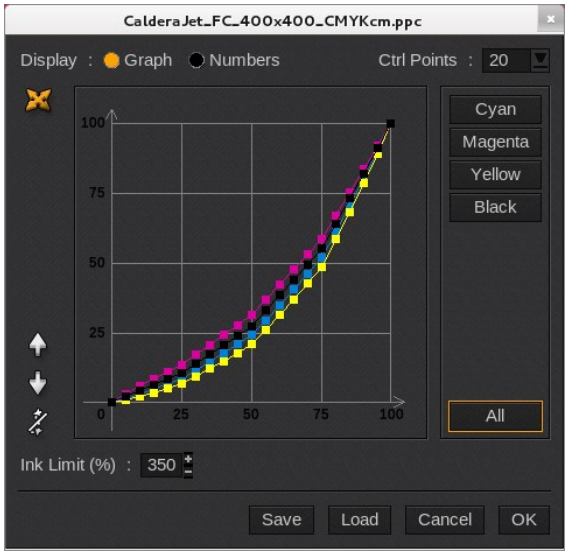
Output tab



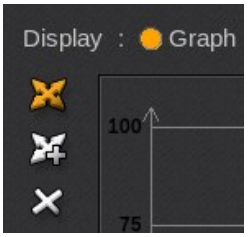
Here are the parameters used to configure the image output on the selected printer.

- **Enable Color Management**: Activate the ICC calibration, which is based on the printing mode and media.
  - **Output profile (Auto)**: sets the ICC profile used to convert the image. By default the one for the current media/mode/quality is chosen. You can choose another one by clicking [...].
  - ***Reset***: if you selected another profile, it will replace it by the default one.

- **Enable Curves**: click this option to use linearization curves.
  - **Linearization curves (Auto)**: sets the linearization curves used to convert the image. By default the current ICC profile's curves are chosen. You can edit them by clicking [...]. This displays the following window:



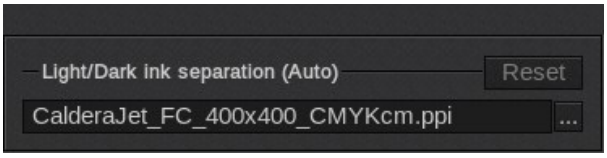
  - **Display**: displays the data either in a **Graph** or with **Numbers**.
  - **Ctrl Points**: choose the number of control points used to create the curve: 5, 10, 20 or 100. You can also choose *Free*. In this case, two new buttons appear in Graph mode to add a new point and to remove one.



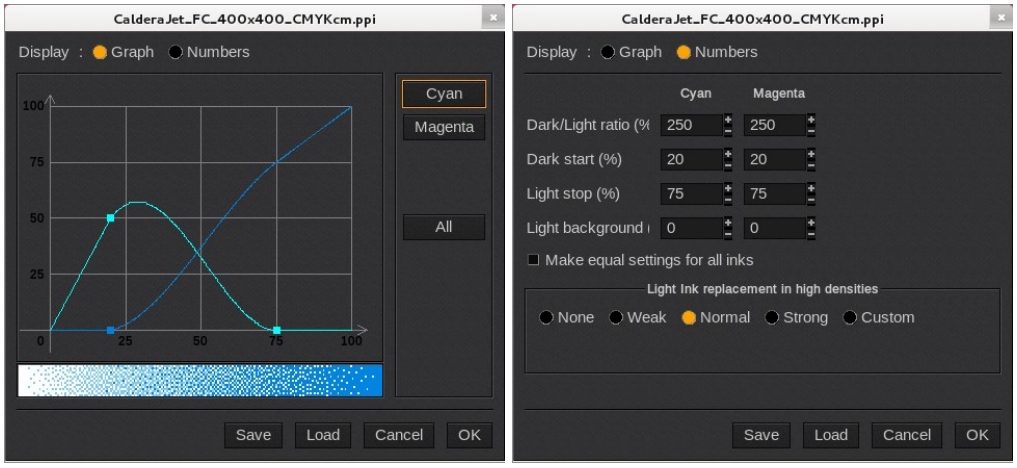
  - **Cyan**, **Magenta**, **Yellow**, **Black** and **All**: selects the curve(s). When a curve is selected, you can see its control points. In our example all the curves were selected.
  - **Raise**, **Lower** and **Straightens**: changes the curve's aspect by raising, lowering or straightening it.

  - **Ink Limit (%)**: changes the total ink quantity that the media can support.
  - ***Save*** and ***Load***: saves or loads a curves correction file (ppc format). When clicked, the *File selection* window opens. Browse to the desired location to save or load.
  - ***Cancel***: closes the window without saving the changes.
  - ***OK***: saves the changes and closes the window.
- ***Reset***: if you made changes to the curves, they will be replaced by the default ones.

- **Light/Dark ink separation**: only available for modes with light inks. It sets the transition curves used to convert the image. By default the current ICC profile's curves are chosen. You can edit them by clicking [...]. It displays the following window:

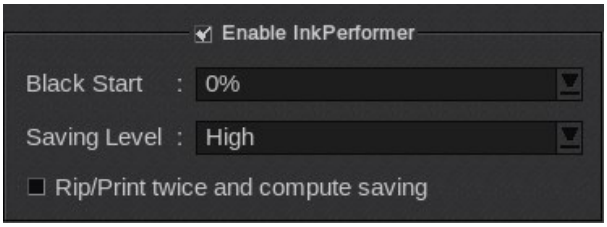


  - **Display**: displays the data either in a **Graph** or with **Numbers**.



  - **Graph**: you can change the values directly on the curves or in the **Numbers** view.
    - **Cyan**, **Magenta**, **Black** and **All**: selects the curve(s). When a curve is selected, you can see its control points. In our example only the Cyan curves are selected.
  - **Numbers**: for each ink, you can define:
    - **Dark/Light ratio (%)**: sets the ratio between dark and light inks as a percentage. There will never be more light plus dark.
    - **Dark start (%)**: this is the percentage where the dark ink starts to replace the light ink. It almost corresponds to the light ink curve top.
    - **Light stop (%)**: the percentage where the light ink stops and starts being in background.
    - **Light background (%)**: sets the percentage of light ink in background, where the curve of light ink is the lower. If 0% is set, there will be no light ink.
    - **Make equal settings for all inks**: forces the same settings for all inks.
    - **Light ink replacement in high densities**: allows to replace a certain proportion of light ink by an equivalent quantity of dark ink in the high densities, in order to save ink and/or prevent over-inking.
  - ***Save*** and ***Load***: saves or loads a curves correction file (ppi format). When clicked, the *File selection* window opens. Browse to the desired location to save or load.
  - ***Cancel***: closes the window without saving the changes.
  - ***OK***: saves the changes and closes the window.
- **Enable InkPerformer**: this option allows you to save ink.

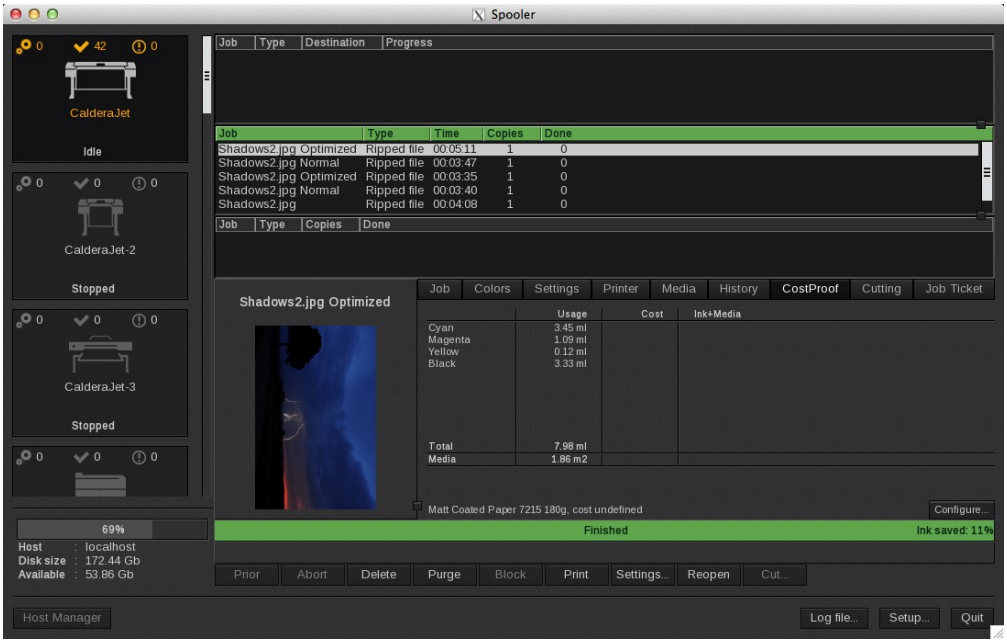
InkPerformer is an option. Its use may require the purchase of a specific key, depending on your RIP package.



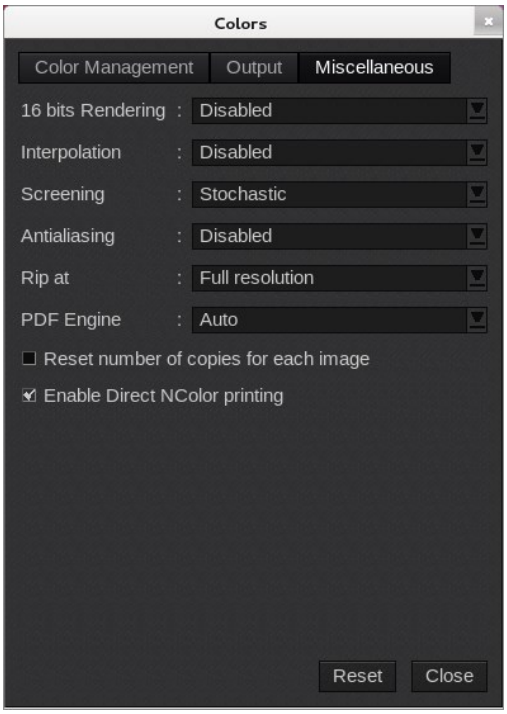
  - **Black Start**: this is the percentage at which the black ink is added in replacement of the others.
    - **0%**: this is the default value, the black is replaced immediately.
    - **Low**: this value is intermediate and calculated automatically by **InkPerformer**.

- **Preserved**: the profile value is preserved.

- **Saving Level**: sets the level of ink saving among **Low**, **Medium**, **High** and **Maximum**, **High** being the default value.
- **Rip/Print twice and compute saving**: when the job is sent to the print/rip, two jobs are launched in the **Spooler**, one without **InkPerformer** activated (with the *Normal* label) and one with **InkPerformer** enabled (with the *Optimized* label). A ink consumption comparison is made and you can see the result on the *Optimized* job.



Miscellaneous tab



In this tab you can find these additional settings:

- **16 bits Rendering**: helps to solve banding issues on gradients especially for very big jobs. It slows the RIP by a factor of 1.5 approximately.

- **Interpolation**: may be used to resample raster images, in order to avoid pixelization effects. Effective only with large rescaling factors. It slows down the RIP by a factor of 2 or 3 for raster files (TIFF, JPEG...) and 5 or 6 for PS/PDF files.
- **Screening**: three screening options are available:
  - *Stochastic*: used by default, very fast with a good quality.
  - *Adaptive error diffusion*: better quality but slower. This one is especially helpful for printing texts, maps, lines...
  - *Rosettes*: this is for PS/EPS/PDF files only.
- **Antialiasing**: enables the antialiasing on vectors (Vectors only), text (Text only), on both (Text and Vectors), or globally (Global). However, it slows down the RIP of the image. The Global entry also enables an algorithm that works better, although it is slower than the other: about 3 or 4 times slower than a RIP without antialiasing.
- **Rip at**: allows the PS/PDF engine to run at full resolution, or at a reduced resolution of 1/2, 1/3 or 1/4.
- **PDF Engine**: selects the engine used for ripping PDF files. Auto keeps the same engine than the one used for previewing the file (in the **Fileman** module). APPE is the engine by default. You can also select GhostScript.
- **Reset number of copies for each image**: resets the number of copies to 1 each time a new image is dropped into the **Print** module.
- **Enable Direct NColor printing**: affects how the print driver will process files eligible for "Direct NColor Printing". When this option is enabled, any eligible files will be printed by directly mapping the input channels to the output channels, bypassing both the ICC conversion and the conversion CMYK to NColor.

A file is eligible when it has extra-channels named the same way as the additional process inks. For example a TIFF with extra-channels names "Orange" and 'Green" is eligible for CMYKOG. The same way a PDF file with Spot Colors names "Orange" and "Green" can be eligible for CMYKOG, but only if you enable the rasterization of the Spots in the **Fileman** module.

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