



Application Notes

Image Editing Automation



Image Editing Automation

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Introduction

Image Editing Automation? Indeed, that is big thinking for RIP software. The following documentation will explain the idea that is behind the image editing automation functionality and how you can benefit from it.

The input data (jobs to be printed) for large format printing can come from several sources. In the best case, you design all your print jobs yourself in your image processing software using always the same settings. In the worst case, each production order comes from another customer each with different settings in the image design and editing software. But to be true, none of the two extremes will occur in practice: No-one will limit himself to printing just his own designs and refuse printing a ready-to-print-design of a year-long customer he created a lot of designs for. And no-one will have only customers having just one order and never coming again with another order. All business is a mixing of the both extremes: You can handle a lot (or most) of your production with one setting but you will need additional settings for the rest of your production.

Imaging that you have to print a huge bundle of images and each should fit in DIN A3 paper format. But the images have different size, some reflect the DIN A3 side length relation, some do not. Scaling the images manually to DIN A3 format and adding borders to fill the empty space between the image size and DIN A3 would be a lot of work – and mistakes might occur. Having a setting saved that will do the scaling and border adding automatically will make this job much easier – with the help of automation.

How do you handle different color management settings that you just need for certain customers? Do you prefer noting the settings on a piece of paper and file it in your customers' records? Or would you like to have the settings saved in the RIP software so that you just have to select them?

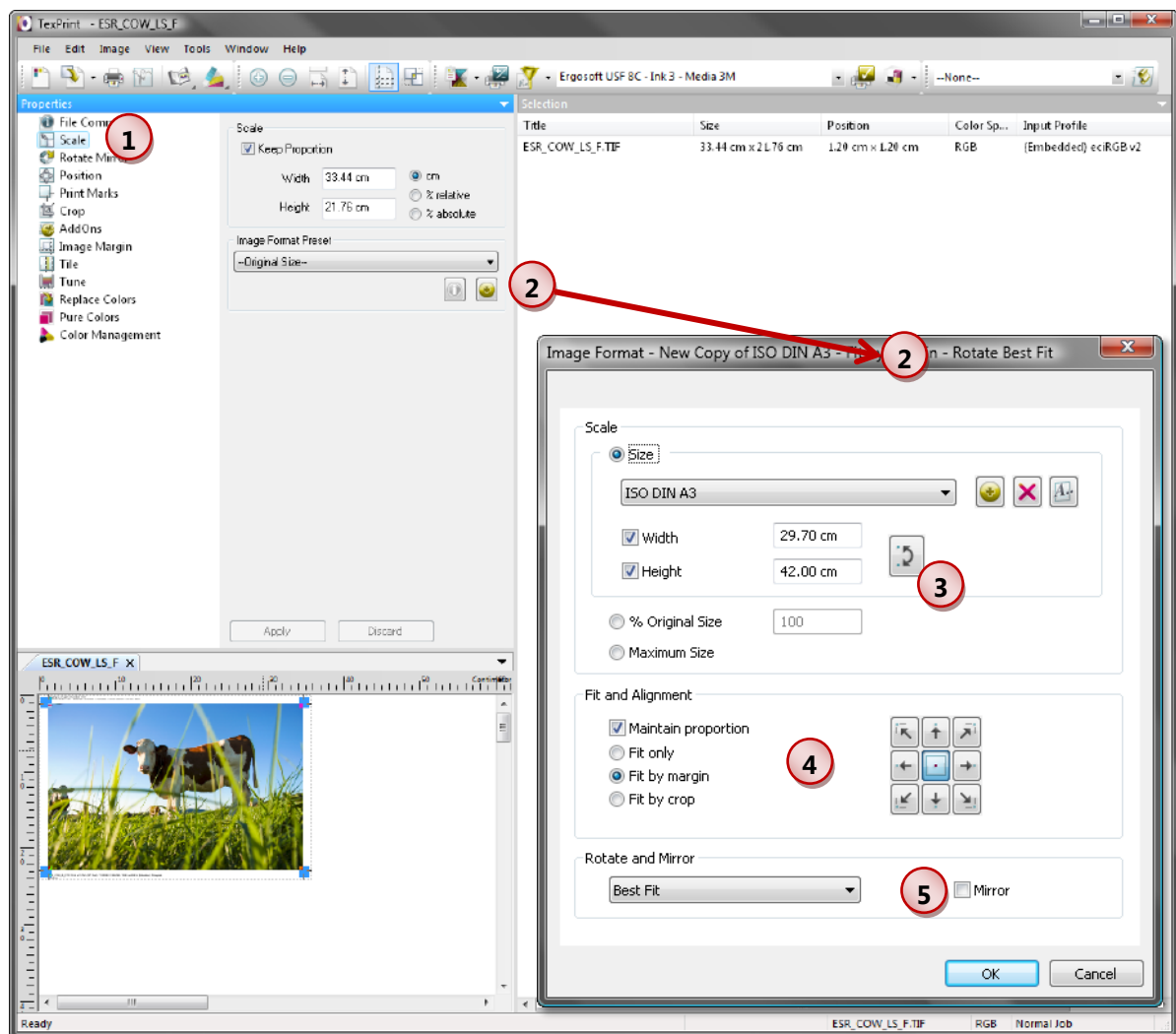
No doubt, image editing automation will make your job easier – provided that you do not have to design the presets in advance but can create them whenever needed. And that is the basic idea behind the design of image editing automation in the **ErgoSoft RIPs**: You are working on combining the jobs and formatting and editing the images in the job while you find out that you repeat the same editing a lot of times. How nice would it be when you could just save the current settings and re-use them with the next image? You can: Image editing automation is designed exactly this way. You edit the image and save the settings in a preset within the current dialog without having to launch another function in the **ErgoSoft RIP**. Above mentioned image format rule (scaling to DIN A3) for example is created in the scaling dialog. Just managing (renaming, deleting, creating complex settings) all the presets is done in another part of the **ErgoSoft RIP**.

The following chapters will explain the creation and usage of basic image presets, the usage of composite image presets, and the management of basic presets including the creation of composite image presets.

Basic Image Presets

Image Format

The **Image Format Preset** helps in bringing the image into a certain layout shape. It includes proportional scaling to a certain width or height or in percentage, automatic border adding, automatic rotation, and mirroring. It combines actions that can be done manually using several image editing commands.



- 1** To create and select **Image Format Presets** use the *Image Properties* page **Scale**. Please keep in mind that all **Image Format Presets** are created and selected in this page, even those that are designed for rotation and mirroring only without explicit scaling.
- 2** Select the **Image Format Preset** you want to use with the selected image(s). Click the **View** button to check the settings of the selected image format preset. The **New** button allows creating a new image format preset based on the selected one.

3 Select the **Scale** type you want to use for the scaling:

- **Maximum Size** scales the image to the maximum job width.
- **% Original Size** allows scaling in percentage of the original image size.
- **Size** allows specifying a size in the current unit. You can either enter the dimensions into the fields **Width** and/or **Height** or select a size from the list which can be managed by adding, deleting, and renaming sizes.
- When both **Width** and **Height** are checked, the image is scaled according to the setting in section **Fit and Alignment**.
- When only **Width** or **Height** is checked, the image is proportionally scaled to the dimension of the specified side; the length of the other side depends on the aspect ratio of the image.
- The **Swap** button swaps the width and height similar to swapping from landscape to portrait and vice versa.

4 Specifying both width and height of a format requires that you specify what should be done when the aspect ratio of the image, with which the setting will be used, does not equal the aspect ratio of the specified dimensions (when after proportional scaling only one side will have the specified value and the other not).

Uncheck **Maintain proportion** to allow distorted scaling so that both sides will have the specified length. Otherwise you have to specify how the scaled image must fit into the specified format:

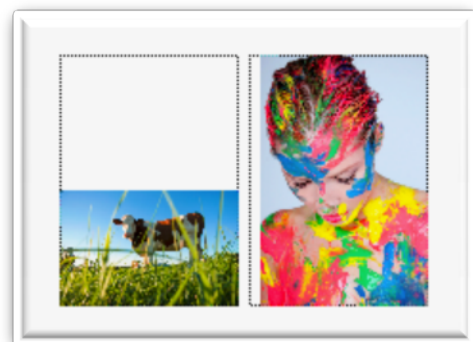
■ **Fit only** will scale the image so that both sides are equal or smaller than the specified dimensions.

■ **Fit by margin** will scale the image so that both sides are equal or smaller than the specified dimensions. Then, white border will be added according to the specified alignment: The image is positioned to where the arrow points, the white border is added on the opposite side(s).

The arrows to the corners will always position the image in the corner and the white space is added to one of the opposite sides.

The arrows to the centers of the sides will always center the image in the selected side and add the white border either to the opposite side (when the selected side is filled with the image) or to both neighboring sides (when the selected side is larger than the corresponding image side).

When the image is positioned in the center white border is added either to the top and bottom or to the left and right side of the image.



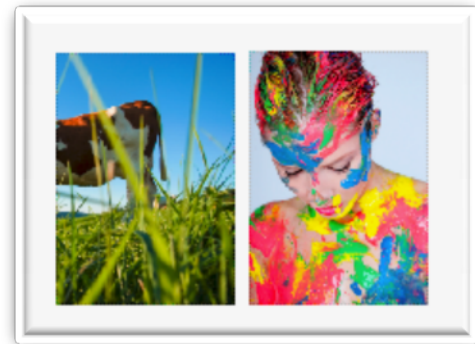
Fit by margin – bottom right

- **Fit by crop** will scale the image so that one side will match the specified size and the other one will be larger. Then, the image will be cropped according to the specified alignment: The image is positioned to where the arrow points and cropped at the opposite side(s).

The arrows to the corners will always position the image in the corner and crop one of the opposite sides.

The arrows to the centers of the sides will always center the image in the selected side and crop either the opposite side (when the length of the selected side matches the corresponding image length) or both neighboring sides (when the selected side is smaller than the corresponding image side).

When the image is positioned in the center, it is cropped either at the top and the bottom or at the left and right side of the image.



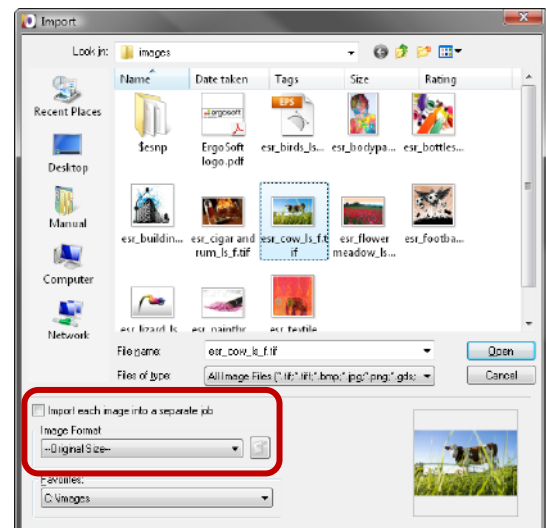
Fit by crop – bottom right

- 5 Specify the rotation and mirroring of the image: Never, by certain degrees (90°, 180°, 270°), to a certain layout (landscape, portrait), or rotate when the image will better fit into the specified size after 90° rotation (best fit).

Image Format during Image Import

To automate scaling, the image format can already be selected in the Image Import dialog.

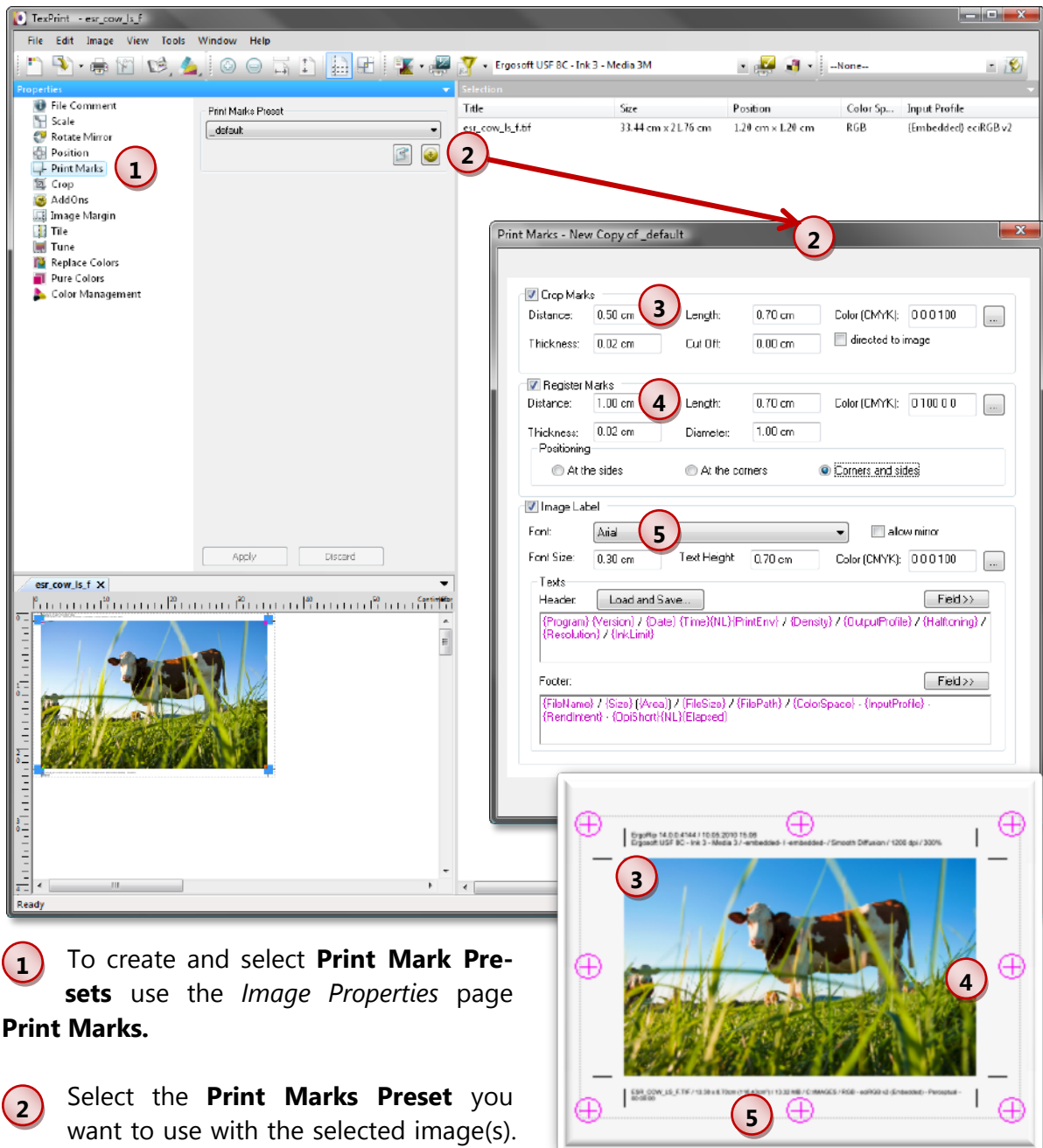
In addition, each image can be imported into a separate job creating new, tabbed jobs during import.



Print Marks

The **Print Marks Preset** helps in adding marks and automatic image/printing information to an image. There are two types of marks that can be printed around the image as well as some information text about the image and printout configuration:

- Crop marks that are printed as lines at the edges of the images
- Register marks that are printed as circles



1 To create and select **Print Mark Presets** use the *Image Properties* page **Print Marks**.

2 Select the **Print Marks Preset** you want to use with the selected image(s). Click the **View** button to check the settings of the selected print marks preset. The **New** button allows creating a new print marks preset based on the selected one.

- 3 Specify the **Crop Marks** that will be printed as lines close to the image borders to show where the image is to be cut.

Set the **Distance** between a crop mark and the image. Enter the **Thickness** and **Length** of the crop marks. Specify the **Color** of the crop mark.

Use a positive value for **Cut Off** to set the crop marks in a way that a part of the image will be beyond the crop marks; when a negative value is entered, a white border will be printed between the image and the crop marks.

When the white border (cut off) is larger than the crop marks the marks will be automatically directed to the image. Mark **directed to image** to force the crop marks to be directed to the image and therefore extending them into the image when they are longer than the defined cutoff.

- 4 **Register marks** are round signs with a cross. Set the **Distance** between a register mark and the image. Enter the **Thickness**, **Length**, and **Diameter** of the register marks. Specify the **Color** of the register mark.

Specify the position of the register mark.

- 5 Specify the **Font**, the **Font Size**, the **Text Height**, and the **Color** for the **Image Label**. The image label is constructed of several text lines above and below the image.

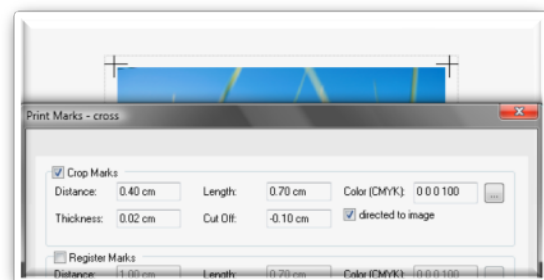
Allow mirror allows the image label to be mirrored when the images are mirrored.

An unlimited number of image labels can be saved in the form of schemes using the **Save** and **Load** buttons. Button **Field>>** helps to include system data like program information, image information, date, output data, etc. Fields are automatically set into braces and displayed in magenta as contrast against directly entered text that is displayed in black.

Examples for Crop Marks:

Cross, so that part of the crop mark on the adjacent side is still visible after having cut one side:

Distance: 0.40 cm; length: 0.70 cm (length must be larger than the sum of distance and cut off); thickness: does not matter; Cut Off: -0.10 cm (for a distance to the image); directed to the image (must be checked).



Frame edges that surround the image:

Distance: 0.50 cm; length: 0.70 cm (length must be larger than distance); thickness: does not matter; Cut Off: -0.50 cm (for a distance to the image); directed to the image (must be checked).

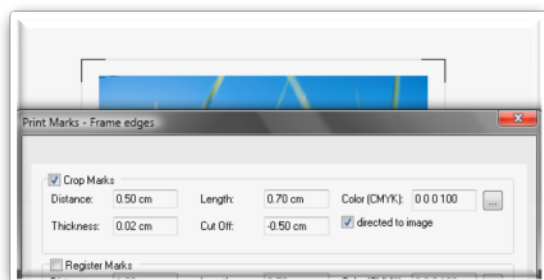
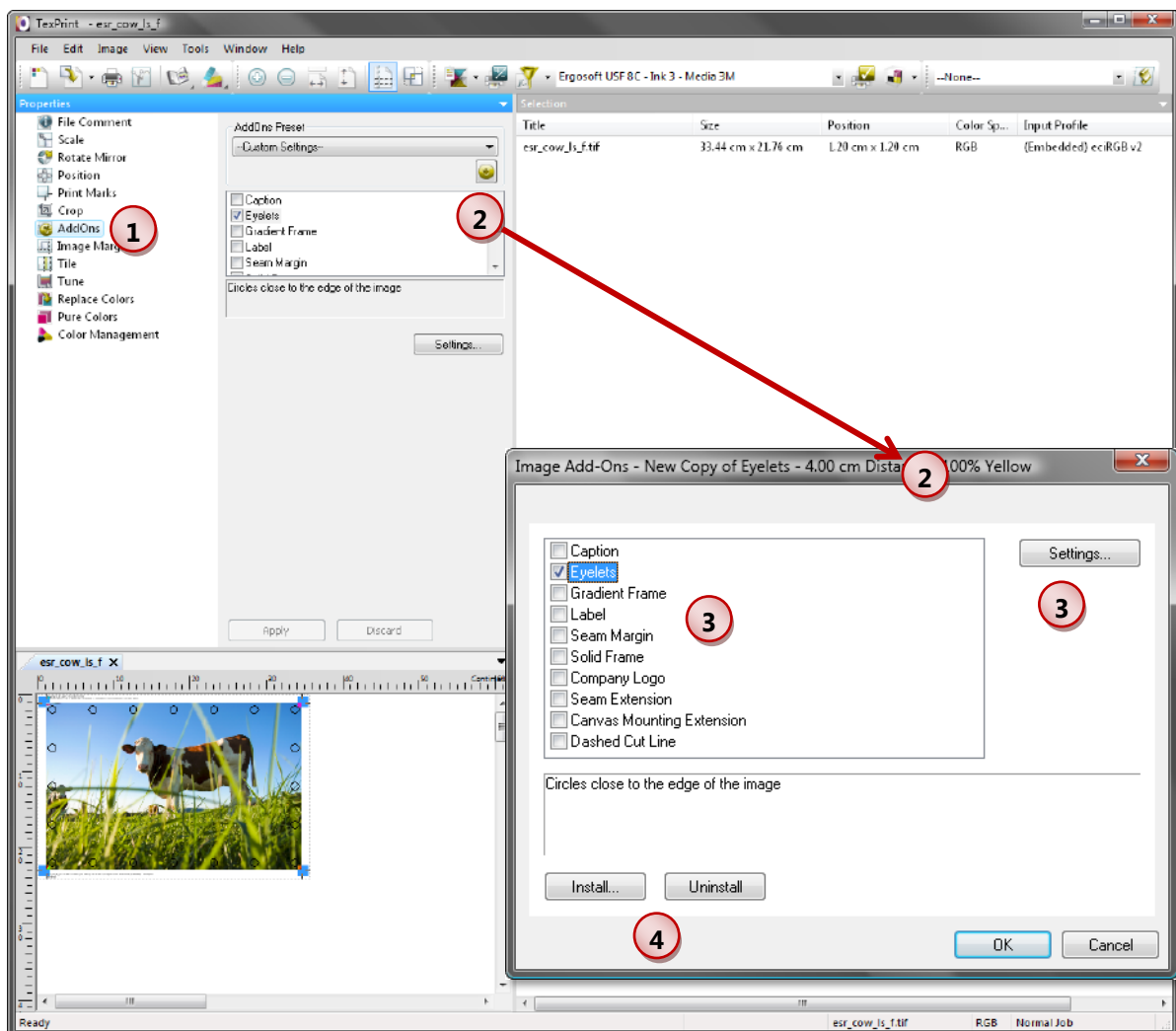


Image AddOns

Image AddOns are customizable pre-defined supplements to the images. Some AddOns such as **Company Logo** and **Dashed Cut Line** are available from the beginning. Other AddOns such as **Eyelets** must be installed before they can be used. The **Image AddOns Preset** allows configuring AddOns and easily applying the configured AddOns to an image. Also, the same AddOn can be used with different configurations in several **Image AddOns Presets**.

Image AddOns can be combined in a preset so that different AddOns with different settings may be assigned in one step. E.g. you can create a preset with the AddOns Company Logo, Caption and Label to add the company logo, the company address and custom text to any image you want to use to advertise your next show – without having to modify the images used as basis.

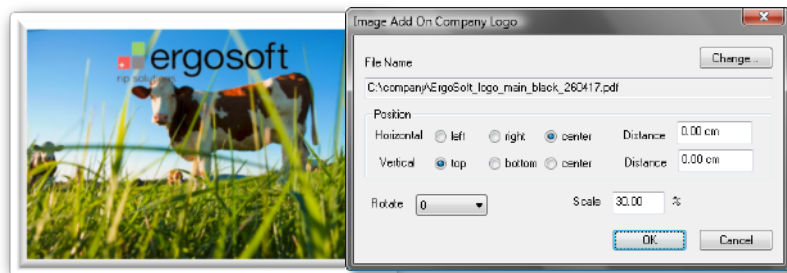


- 1 To create and select **Image AddOns Presets** use the *Image Properties* page **AddOns**.
- 2 Select the **Image AddOns Preset** you want to use with the selected image(s). Click the **Settings** button to check the settings of the selected image AddOns preset. The **New** button allows creating a new image AddOns preset based on the selected one.

- 3 Select the image AddOn(s) to be used in the current image AddOns preset and configure each one by selecting it and clicking the **Settings** button.
- 4 Depending on your version of the **ErgoSoft RIP**, up to four AddOns are always available in the system: Company Logo, Seam Extension, Canvas Mounting Extension, and Dashed Cut Line. All other AddOns must first be installed before they can be used. AddOns that are not needed can be uninstalled and later re-installed when needed.

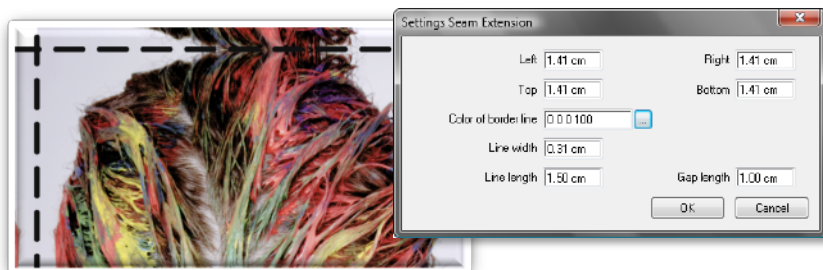
Company Logo

An image file will be printed on top of each image. The file name and the position can be specified.



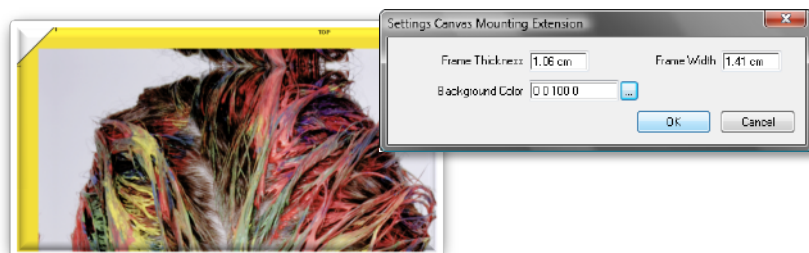
Seam Extension

This optional AddOn mirrors the margins of the image on all four sides to get a seam.



Canvas Mounting Extension

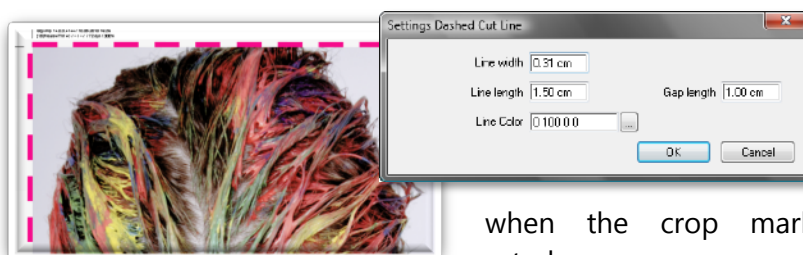
This optional AddOn extends the image on all sides for mounting canvas on a wooden frame.



Dashed Cut Line

A dashed line will be printed on the image where the crop marks indicate.

Please note that this AddOn will only be active (Print Marks) are also active.

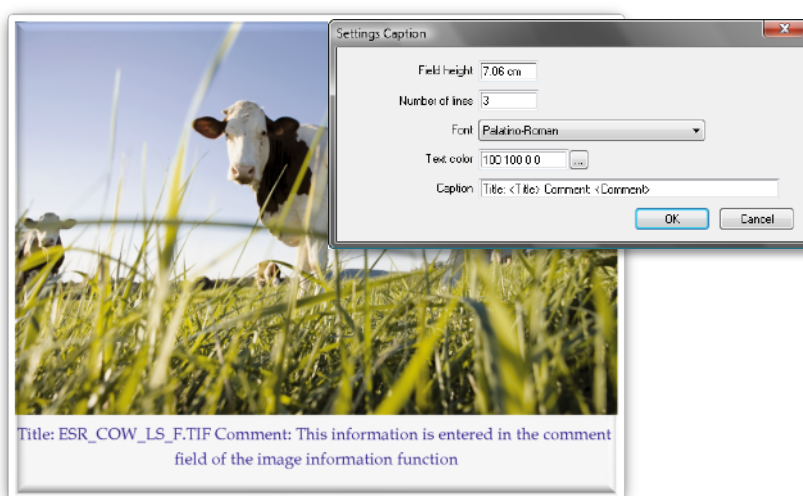


when the crop marks are activated.

Caption

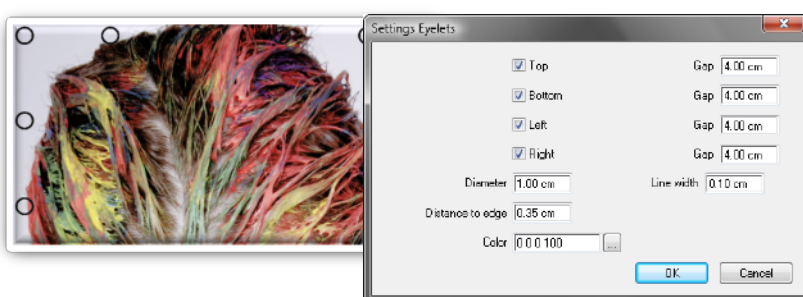
This AddOn adds text that is centered and wrapped below the image.

The text can be entered manually or automatically captured from the image information field. "<Title>" and "<Comment>" refer to the name and the field "Comment" of the image information function.



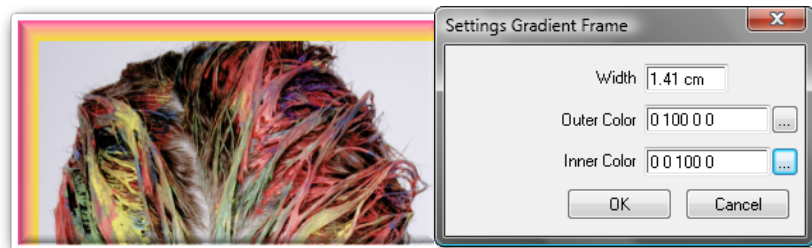
Eyelets

This AddOn creates circles close to the edge of the image.



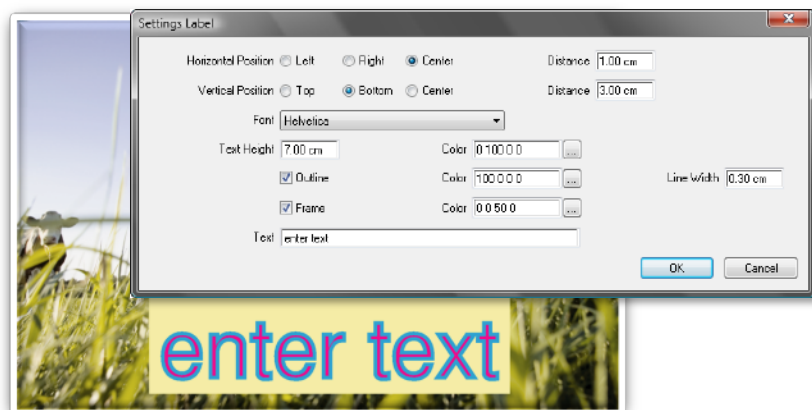
Gradient Frame

This AddOn creates a frame around the image. The gradient is from the inner color to the outer color.



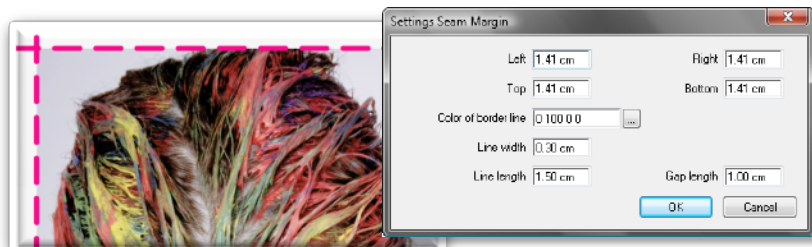
Label

This AddOn adds variable text that the user is prompted to enter.



Seam Margin

This AddOn creates a margin on all four sides to get a seam.



Solid Frame

This AddOn creates a frame of a given solid color around the image.

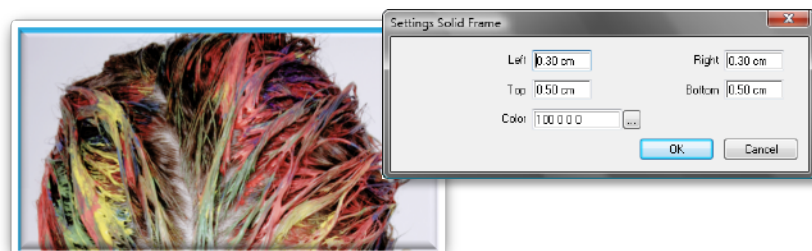
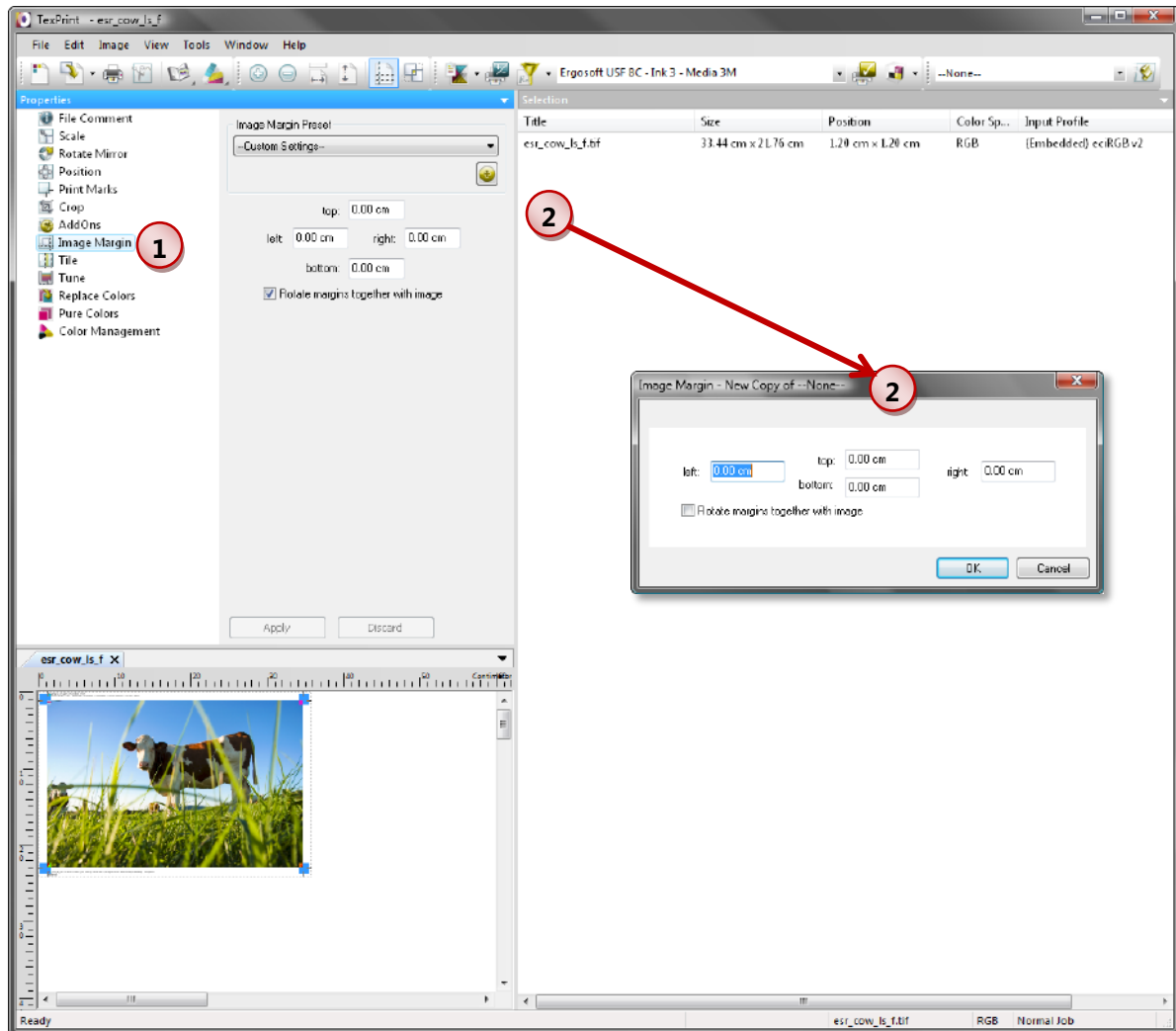


Image Margins

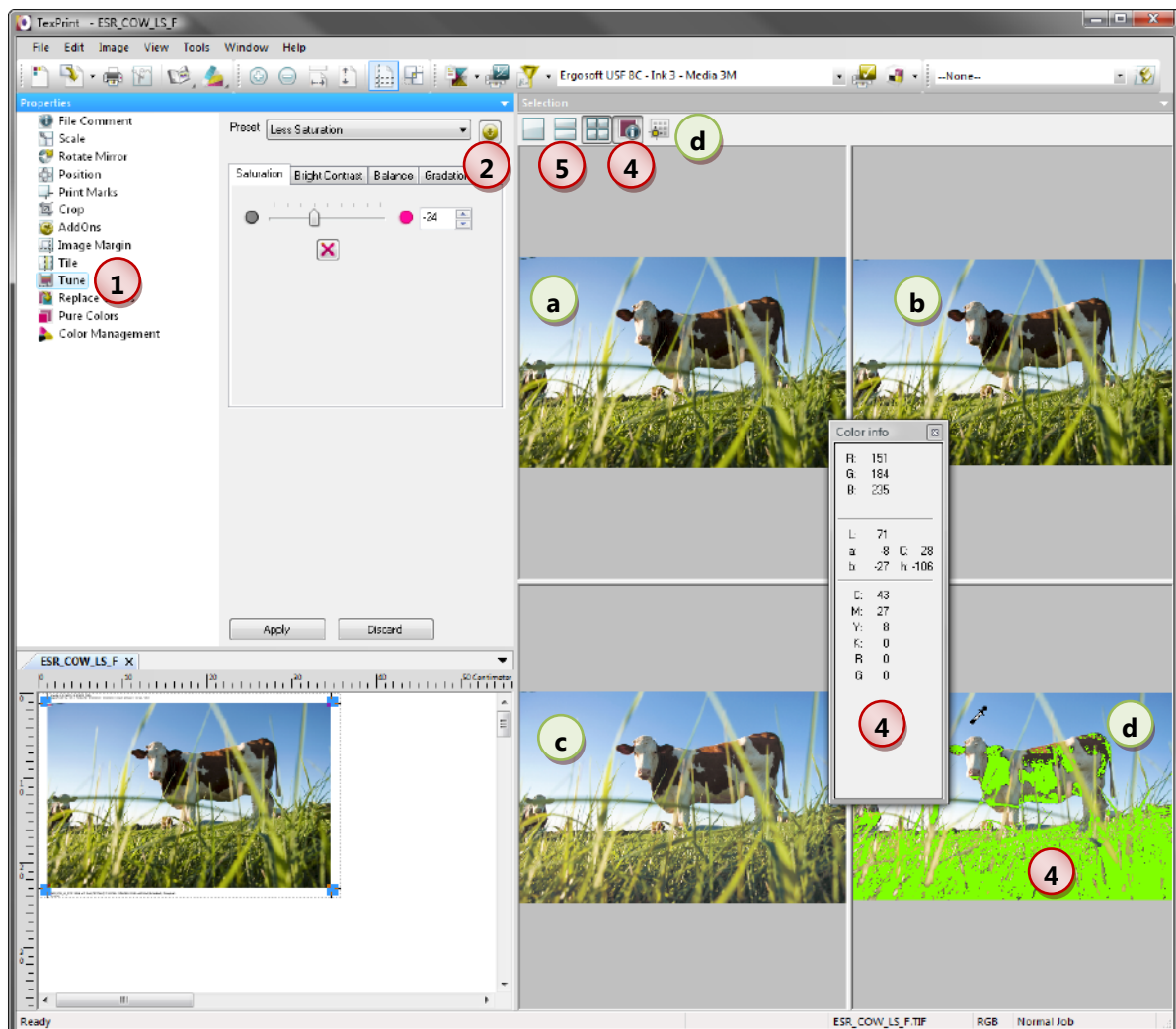
The image margin is white space between the image and the printer marks. It enlarges the image the **ErgoSoft RIP** is working with. The **Image Margin Preset** allows configuring image margins and easily applying the configured image margins to an image.



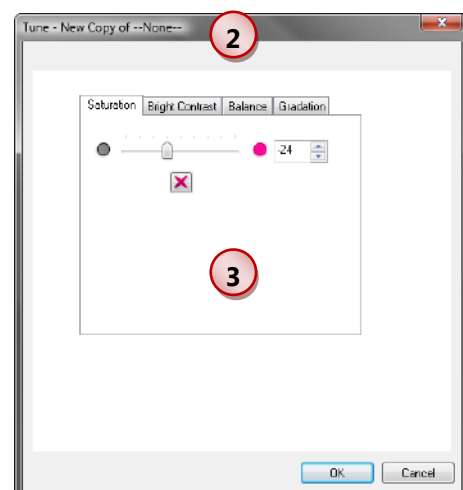
- 1 To create and select **Image Margin Presets** use the *Image Properties* page **Image Margin**.
- 2 Select the **Image Margin Preset** you want to use with the selected image(s). Click the **New** button to create a new image margin preset based on the selected one.

Tuning

The **Tuning Preset** helps in making color corrections to the current image. Please note that this function is not intended to replace an image editing program; it is only meant to be a tool for global changes in the image.



- 1 To create and select **Tuning Presets** use the *Image Properties* page **Tune**.
- 2 Select the **Tuning Preset** you want to use with the selected image(s). Click the **New** button to create a new tuning preset based on the selected one.



3 The available color corrections are:

- The **Saturation** of the image can be changed.
- The **Brightness** and **Contrast** of the image can be changed.
- The color **Balance** (gamma values of the color curves) can be changed. Thus, unwanted colors can be removed from the image and dull or muted colors can be enhanced.
- Custom **Gradients** (color curves) can be created. Thus, the color arrangement of an image can be totally changed.

The following tools help to visualize and manage the color corrections:

4 Open/hide the info window displaying color information about the point in the image that is touched with the tip of the color picker pen.

5 Three different sets of previews can be displayed:

- One preview window showing the image with the modified colors (b).
- Two preview windows: The first showing the original image (a) and the second showing the image with the modified colors (b).
- Four preview windows: The original image (a), the image with the modified colors (b), a printer simulation preview (c), and a printer simulation preview with out-of-gamut colors marked (d). The color for marking the out-of-gamut parts can be customized.

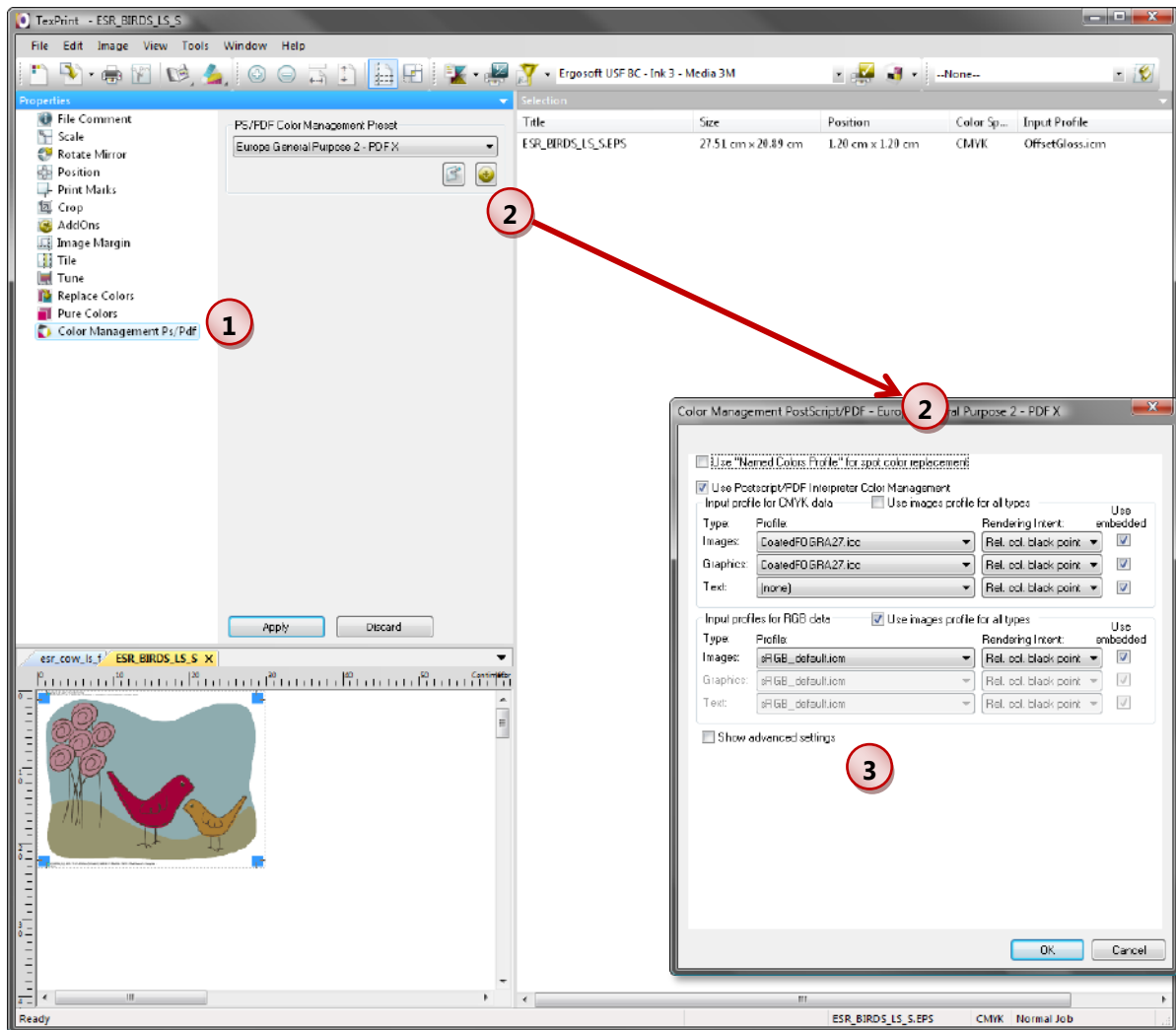
Extra Channels

The **Extra Channels Preset** helps in assigning spot color channels saved in the image with the spot color slots configured in the print environment. This image based assignment might be different from the basic settings in the print environment.

For more information please refer to the manual part about Spot Color Printing.

Color Management for PostScript/PDF Images

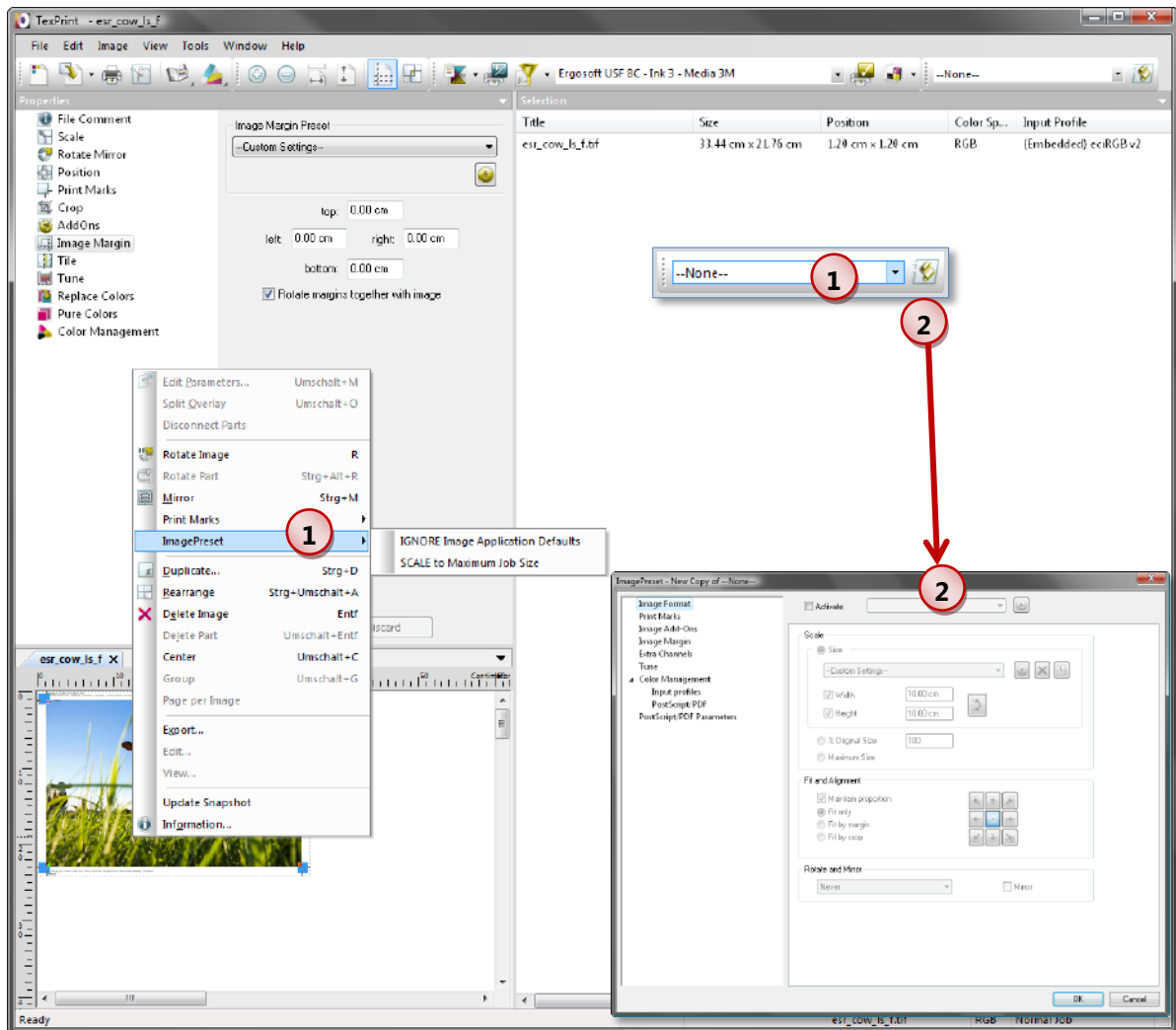
The **PS/PDF Color Management Preset** helps in using a certain input color management setting for certain files. This way, you can easily create different color management settings for PostScript or PDF images delivered by certain customers and re-use them whenever needed.



- 1 To create and select **PS/PDF Color Management Presets** use the *Image Properties* page **Color Management**.
- 2 Select the **PS/PDF Color Management Preset** you want to use with the selected image(s). Click the **Edit** button to check and modify the settings of the selected print marks preset. The **New** button allows creating a new print marks preset based on the selected one.
- 3 For a detailed description of the available settings please refer to the manual part about Image Color Control.

Composite Image Presets

Often, you might not need only one of the basic image presets but several of them for easy and fast image editing. For this reason, the **ErgoSoft RIPs** offer the possibility to create **Composite Image Presets** combining the basic image presets and include some basic settings for PostScript file treatment.



1 To select **Composite Image Presets** select *ImagePreset* from the *Image Context Menu* (right-click on the image).

2 Click the **New** button in the *ImagePreset* toolbar to create a new Composite Image Preset based on the selected one.

Scroll through the list of basic image presets and PostScript parameters and configure the Composite Image Preset:

- Check **Activate** to overwrite the current image settings with the Composite Image Preset. When this box is not checked, just the current setting of the image in the job is used.
- Select the basic image preset you want to use (after having activated this kind of setting) or manually enter a configuration.

When closing this dialog by clicking the **OK** button you are prompted for a name for the new Composite Image Preset.

Managing Image Presets

In order to prevent you from making unwanted changes in the hurry of production preparation, image presets can only be created in the image editing functions. For renaming, deleting, and editing them you need to use the preset management tool.

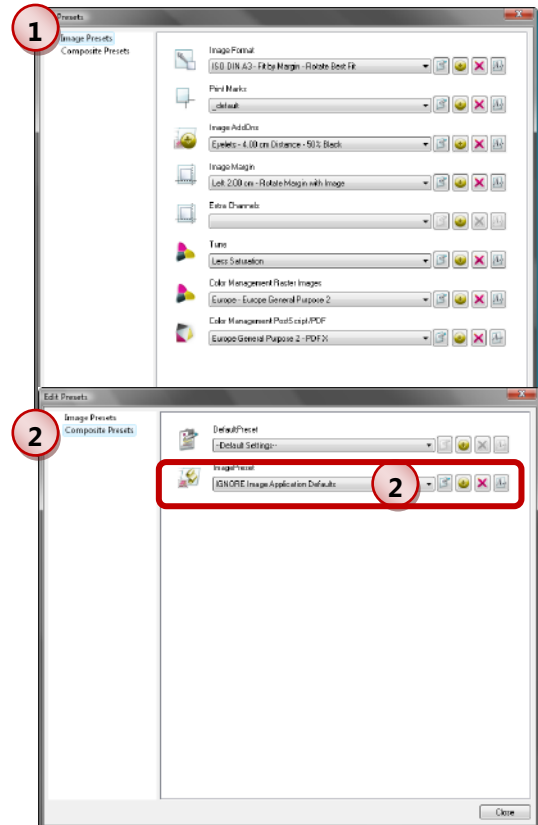
1 To manage Basic Image Presets, start the preset management tool by launching menu *Tools > Edit Presets > Image Presets*.

2 To manage Composite Image Presets, start the preset management tool by launching menu *Tools > Edit Presets > Composite Presets* and select the preset **ImagePreset**.

The presets can be edited, created, deleted, and renamed.

Since the presets are only managed here, it does not matter which ones are selected when closing this dialog. For setting the default image presets please refer to chapter "Setting Default Image Presets" below.

For a description of the settings please refer to the chapters "Basic Image Presets" and "Composite Image Presets" above and the manual part about Image Color Control.



Setting Default Image Presets

Default image presets are automatically applied whenever an image is imported. The **Global** default settings will be overwritten by an **ImagePreset** selected in the *ImagePreset* toolbar. Thus, you can set a global configuration for most of your workflow and replace it by special automatic settings when needed without having to modify the global settings.

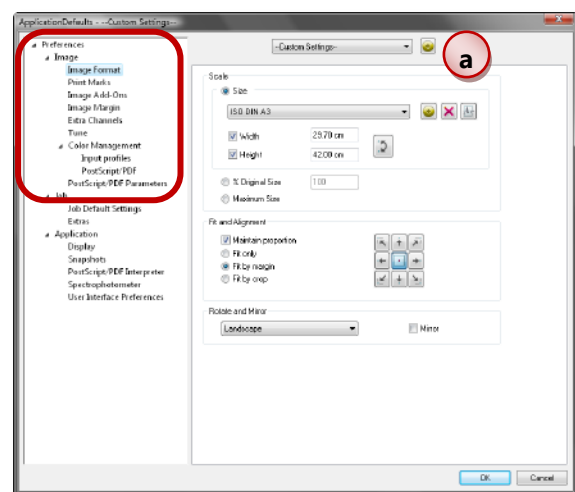
Global Image Settings

The global settings for image configuration are part of the overall global settings. They do not affect images that are already put into a job but only images imported after having made the changes. Thus, also when opening a job, the global settings are never applied.

To specify the global image settings, select menu *Tools > Options > Preferences > Image*

Scroll through the list of image settings and PostScript parameters and specify the default settings:

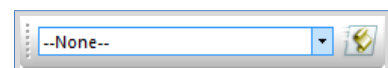
- Select the basic image preset you want to use
- When needed, modify the displayed configuration and save it using the **New** button (a) to create a new basic image preset.



Please note that the **Image Format** configuration specified in the global image settings will be the default image format setting in the image import dialog in which it can be changed for the current import when needed.

ImagePreset for Next Job

In addition to selecting an **Image Format** in the image import dialog, an **ImagePreset** can be selected in the *ImagePreset* toolbar whenever needed. These settings are applied to all images being imported until another **ImagePreset** is selected.



Examples for Presets

Scaling to DIN A3 with White Border and Rotation when Needed

Situation:

All images of a certain customers have to be scaled to fit on DIN A3. A white frame of minimum 1 cm must be between the image itself and the paper edges. The image is to be rotated when it fits better. Since the printout is on roll media, crossed cut marks are also needed.

Configuration:

This complex configuration needs a composite image preset made up of the basic image presets **Image Format** and **Print Marks**.

1 Image Format

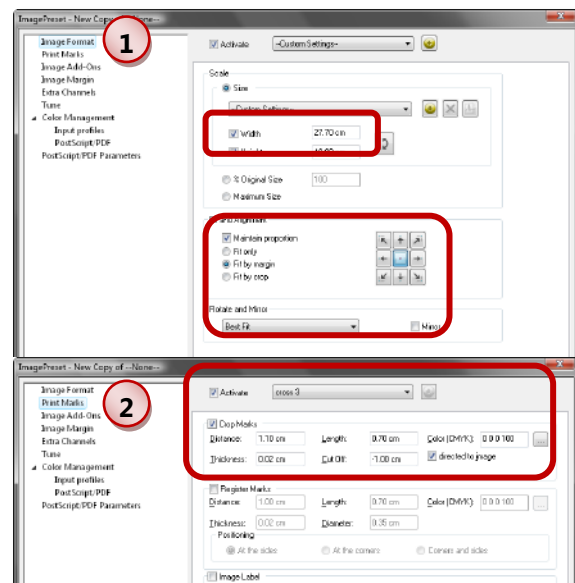
Check **Activate** and select a pre-defined image format. Since the image including white border must fit into DIN A3, the image itself must be scaled to less than DIN A3. Thus, enter the dimensions 27.7cm x 40 cm, select **Fit by Margin** and **Best Fit**.

2 Print Marks

Check **Activate** and select pre-defined print marks. To get a cross, the crop marks must be **directed to the image**. To implement the white border, the crop mark must be moved away from the image by setting a negative **Cut Off** having the size of the border (-1.0 cm). When marks are directed to the image, the length starts far from the image and go in direction to the image. Thus, the **Distance** must be larger than the absolute value of the Cut Off (1.1 cm in the example). **Length** must be larger than the sum of **Distance** and **Cut Off** (1.1 cm + -1 cm = 0.1 cm which is less than 0.9 cm). **Thickness** does not matter.

Note:

When you need other print marks or do not want to use print marks at all or when you need to have a border with different sizes for the sides, you must use the **Image AddOn** "Solid Frame" to implement the border (with color settings for white). Then, the print marks must be closer to the image (smaller Distance).



Scaling Images by Factor 10

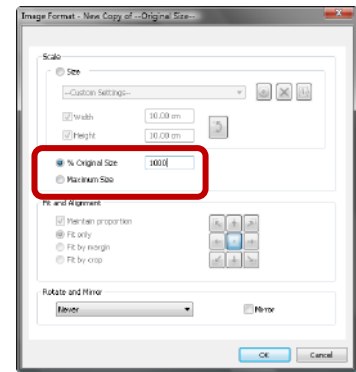
Situation:

All (vector) images are created just 1/10 of the size for the printout, e.g. 10 cm when 1 m should be printed.

Configuration:

This configuration needs an **Image Format** preset.

Check **% Original Size** and enter the percentage for the scaling.
Factor 10 equals 1000%.



Special Color Management Settings

Situation:

All raster images from a certain customer are taken with a special camera with AdobeRGB1998 color setting. But they might be viewed in Photoshop and saved with embedded profile AppleRGB. This customer also creates PDF files with these images and adds CMYK elements using his own color settings (he already provided you with these settings exported in an ICC profile). His CMYK raster data are also created using this setting. You already know that the gamut of your customer's ICC profile is smaller than your printer gamut.

Configuration:

Since this color setting should include settings for raster files and PostScript/PDF files a composite image preset is needed made up of both **Color Management** presets.

1 Color Management > Input profiles

Check **Activate** and select a color management preset. Select the color management settings needed for RGB and CMYK raster data: Do not check **Use profile embedded in image data files** for RGB files because always the specified external input profile should be used. Select your customer's ICC profile for CMYK data.

2 Color Management > PostScript/PDF

Check **Activate** and select a preset. Specify the color management settings needed for the different object types available.

