

ArtCom®



ColorXchange

2008

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ColorXchange Manager

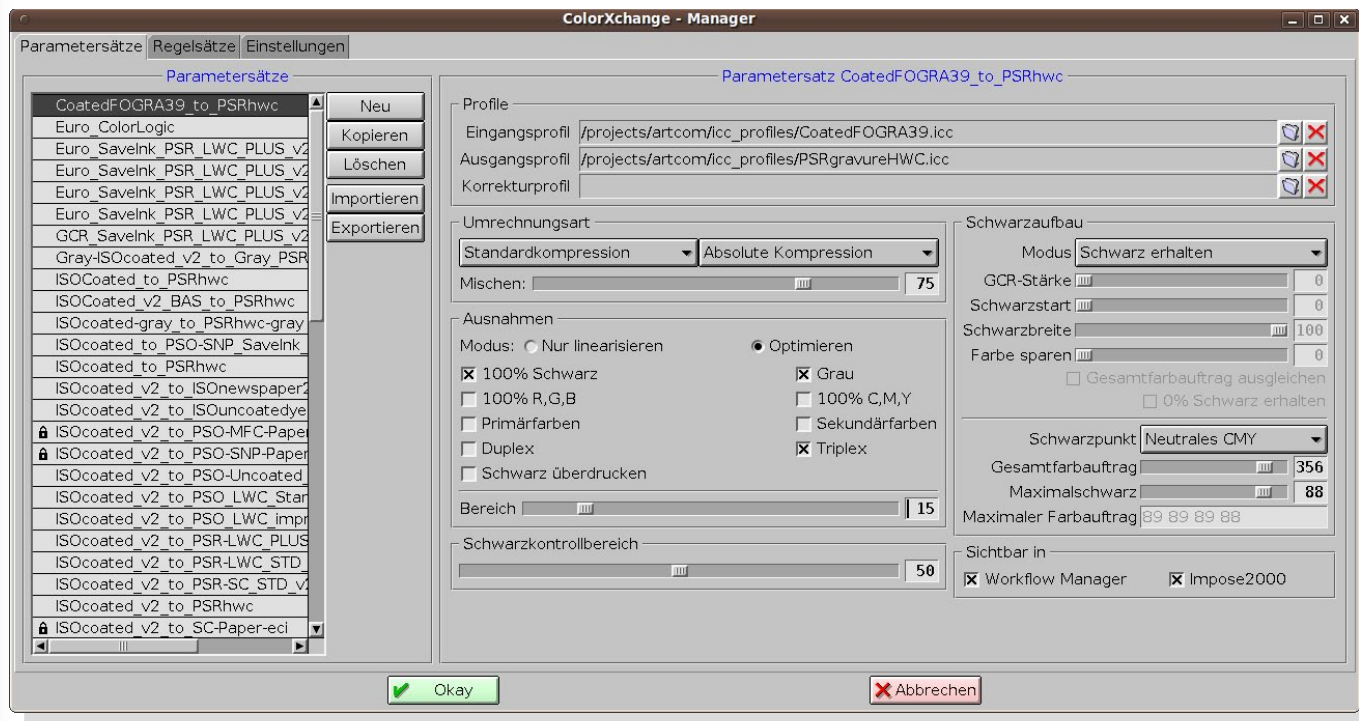
Release 20.2

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 - Parameter sets
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- LinkCreator
- Use in the Workflow Manager
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ColorXchange Manager

Parameter sets



- Creation of DeviceLink profiles for specific color room transformations (input and output profiles).

ColorXchange Manager

- Parameter and rule sets are created with the button **New**.
- Copy creates 1:1 copies of rule sets that may be edited later on.
- **Export** exports (saves) a parameter and rule set. All settings and the used ICC profiles are also saved. The parameter sets are saved along with the rule set.
- **Import** reads an exported parameter set or rule set including the used ICC profiles and parameter sets (for rule sets). The used ICC profiles are then saved in the folder of the parameter set.

ColorXchange Manager

- **Input profile.** The input profile of the transformation.
- **Output profile.** The target profile of the transformation.
- **Correction profile.** Here you can add the DeviceLink correction profile (LinkCreator).

ColorXchange Manager

Rendering Intent

- **Transformation method:**
 - Defines the method to transform from source to target color space. In addition to the standard ICC Rendering Intents (Perceptual“, „Relative colorimetric“, „Saturation“ and „Absolute colorimetric“) we offer additional rendering intents. They are based on a colorimetric transformation and are independent of profile manufacturers:
 - **"Standard compression"** is our standard method for gamut compression and gamut mapping.
 - **„Relative with black compression“** is working relative colorimetry and compresses only the black point. This is similar to the Photoshop setting „Use depth compensation“.
 - **"Dynamic compression"** compares the source and target color space and creates a compression to minimize the out-of-gamut areas.
 - **"Absolute compression"** is based on the rendering intent „Absolute colorimetric“ and compresses the gamut near the white and black point. This rendering intent may be used for proofing if the gamut of the target file is slightly smaller than the proofing reference.

ColorXchange Manager

Rendering Intent

- **Mix**
 - With the slider „Mix“ you can create a smooth transition from one rendering intent to another. This option is only available for our own rendering intents.
 - This is especially useful for transformations where you also want to carry out a loss compensation. You control this compensation with the slider.

ColorXchange Manager

Exceptions

- Exceptions are used to prevent the transformation of special colors. If the source and target colors are identical, these colors are only linearized, if the colors differ, they are only adjusted. Exceptions guarantee that the special characteristics of colors remain unchanged.
Exceptions may be treated in two different ways. These options are only different for the exceptions duplex, triplex, primary colors and secondary colors.
- In the case of **Linearization** the selected exception is simply sent through and adjusted in the tonal value.
- Optimizing calculates the best colorimetric match possible.

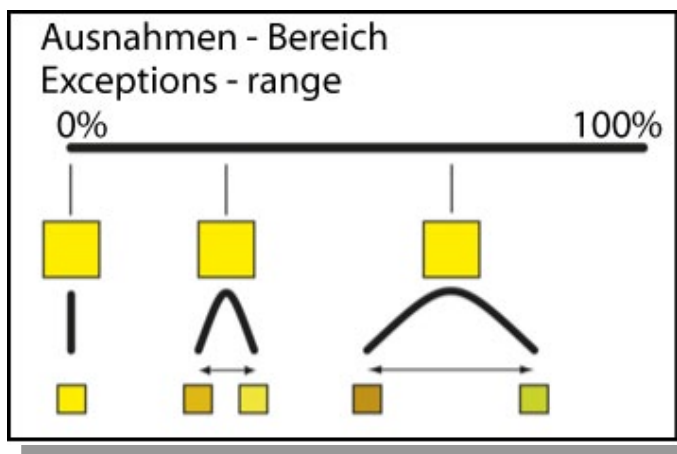
ColorXchange Manager

Exceptions

- **100% black** preserves pure black.
- **Grey** keeps pure grey colors, e. g. RGB (50/50/50) or CMYK (0/0/0/20).
- **100% R,G,B** preserves the 100% secondary colors red (magenta + yellow), green (cyan + yellow) and blue (cyan + magenta).
- **100% C,M,Y** preserves the 100% primary colors cyan, magenta and yellow.
- **Duplex** preserves combinations of black and primary colors.
- **Triplex** preserves combinations of black and secondary colors.
- Hint: Starting with Release 20.1 exceptions are based on dependencies in order to prevent illogical input.

ColorXchange Manager Exceptions

- Primary colors preserves pure print colors.
- Secondary colors preserve combinations of two print colors.
- Back overprint receives the overprint function of 100% black.
- Range defines the range (spread) for a smooth transition of the exceptions. Please keep in mind that very small changes (<10%) may have no effect due to the LookUp tables in the profiles.



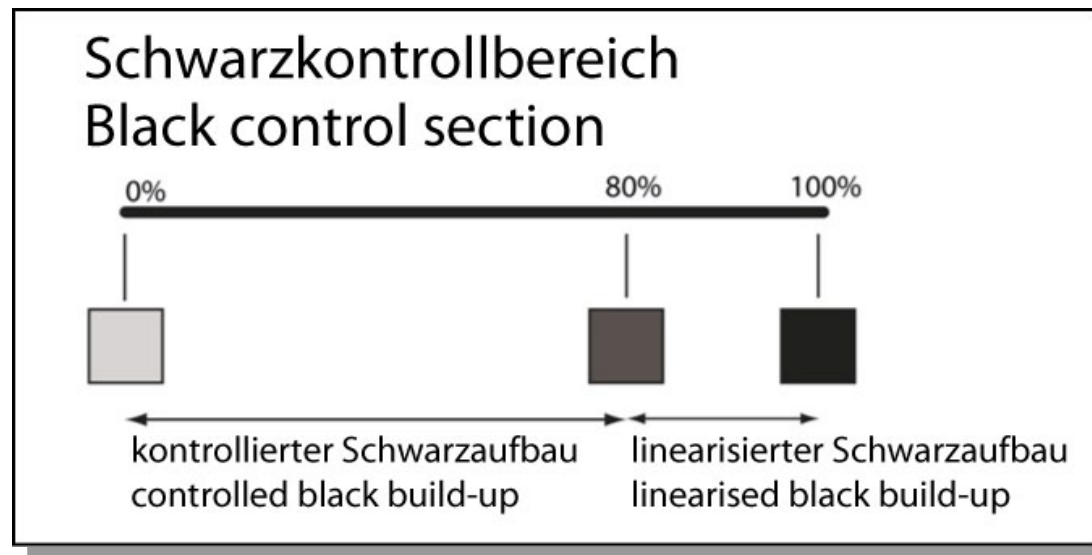
ColorXchange Manager

Black control section

- The **Black control section** influences the separation and thus the extend of the InkSave. Up to the defined black limit (**range from 0-100%**) the transformation is exactly controlled with respect to colormetrics. If you choose for example of 80% and the input black is above the limit, the system will only add the „excess“ only linearized. That prevents problems if a (too) high black content does not result in any differences with respect to colormetrics. The control section refers to the black content of the source color (source profile). The black control section may prevent problems especially in cases when the profiles are not exactly 'clean'. See the figure on the next page.

ColorXchange Manager

Black control section



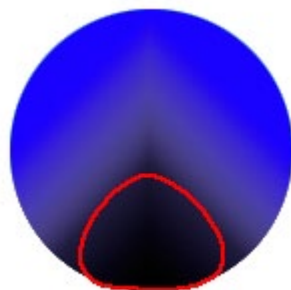
ColorXchange

Black composition

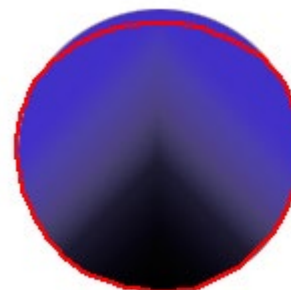
- The separation settings (**UCR, GCR value, Black start, Black width**) have great influence on the use of black and so on the behavior of SaveInk. The more black is created by the separation regulation the stronger it may be increased by the SaveInk setting.
- The setting Black width of 10% has the result that black is used especially in neutral tones.

ColorXchange Manager

Black width



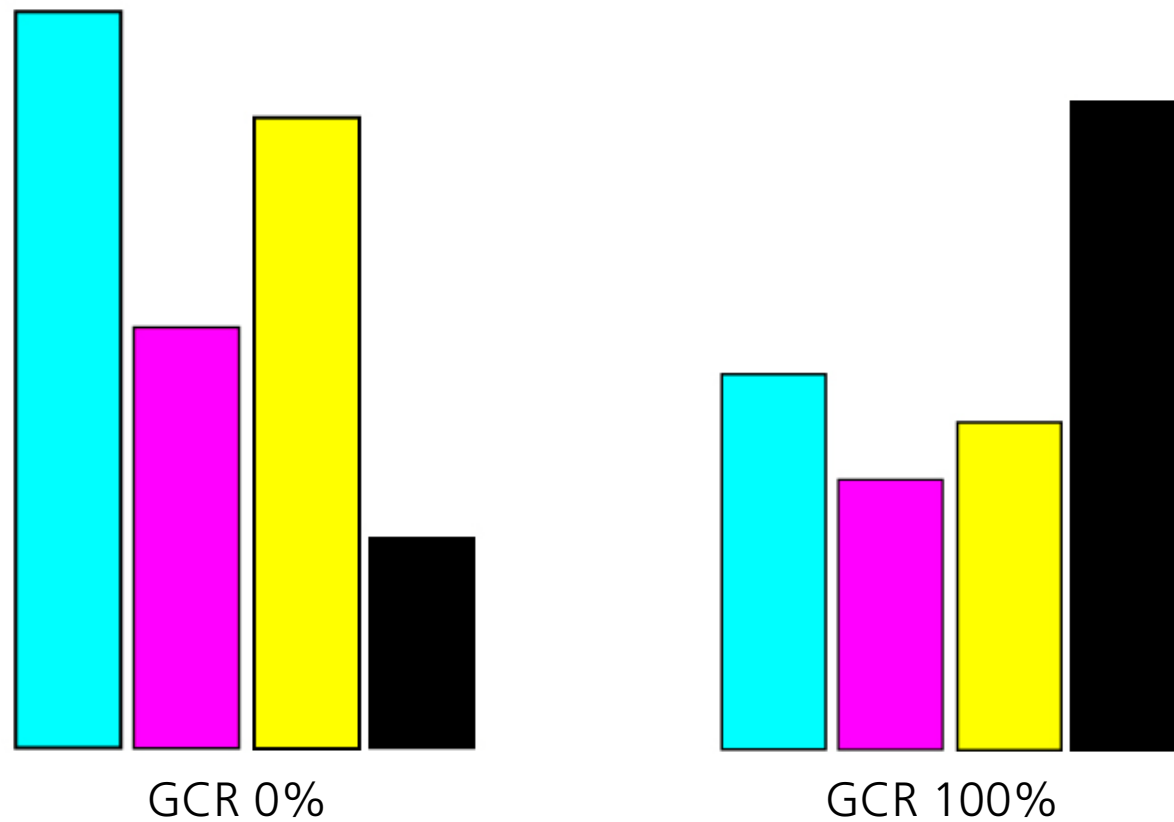
10 % black width



90 % black width

The black width settings of 10% results in the use of black especially in neutral tones.

ColorXchange Manager GCR



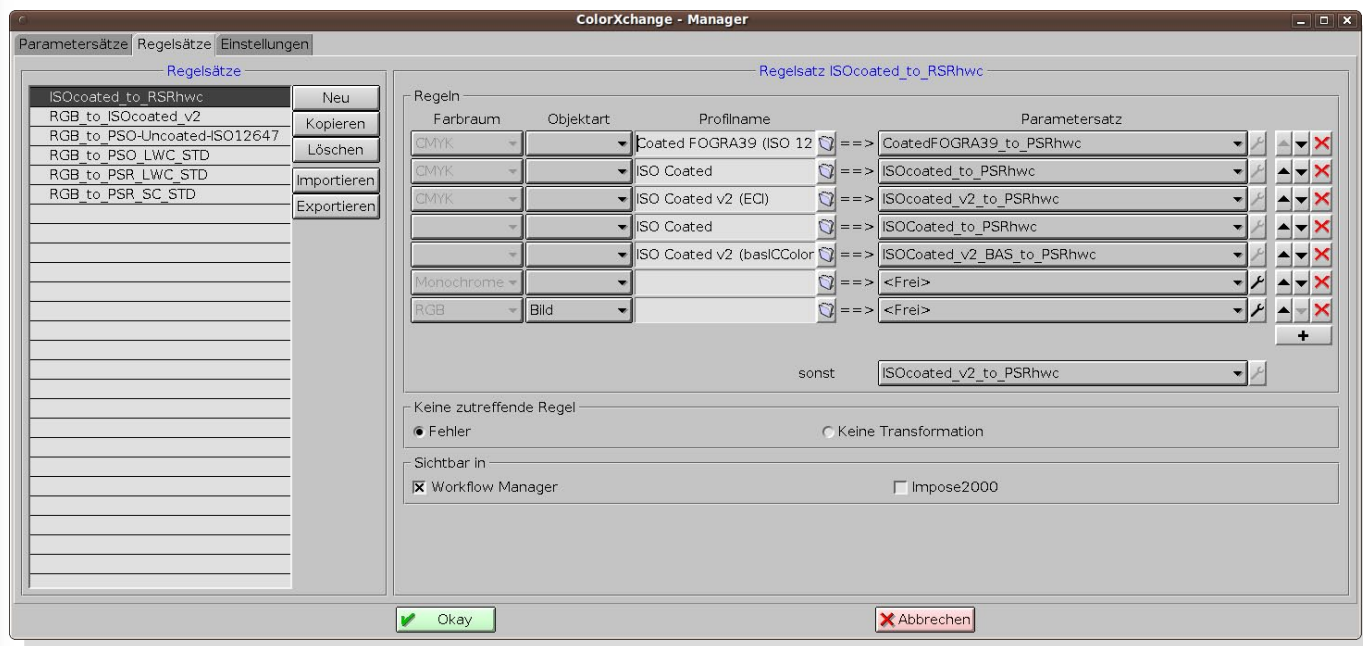
ColorXchange

Maximum ink

- *Compensate maximum ink* causes with separation preserving DeviceLink profiles an even better depth by an increased use of black.
- *Keep 0% black* may from now be used for separation preserving DeviceLink profiles in combination with the function Compensate maximum ink. This function has until now only been available for the option Save Ink and has the result that areas, that do not contain black in the original separation, remain without black after the conversion. This is useful if overprint behavior of objects without black is to be preserved.

ColorXchange Manager

Rule sets



- Creation of rule sets from several DeviceLink profiles for complex color room transformations.

ColorXchange Manager

Rule sets

- Rule sets are used for complex transformations.
- Rule sets are necessary to convert PDF/X files correctly.
- Up to 16 conversions may be included in a single rule.
- If a profile name is selected with the assigned conversion then this conversion is only applied to the selected profile (PDF/X Output-Intent).
- In addition to the assigned ICC profile name you can also or only select the respective OutputIntent for PDF/X from the ICC profile. If both is selected the system will process first the OutputIntent, if the PDF file has no OutputIntent the selected ICC profile is used instead.

ColorXchange Manager

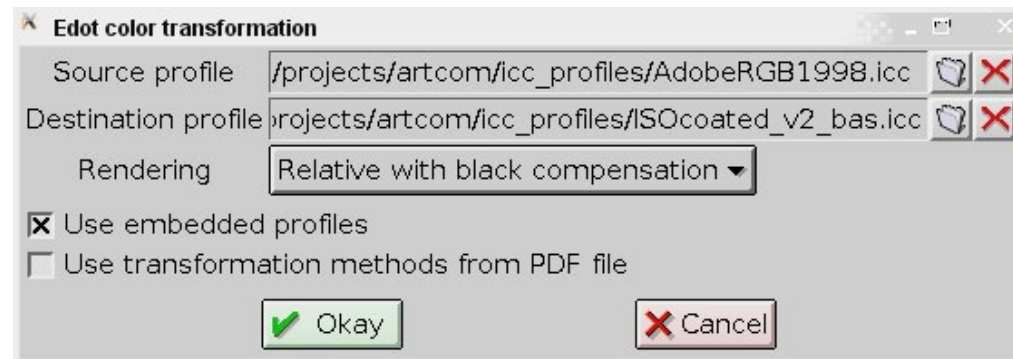
Rule sets

- Rules may include RGB to CMYK, CMYK to RGB, CMYK to CMYK, DeviceGray to Gray, Gray to Gray and CMYK to Gray transformations.
- For the object type you can choose to which elements the transformation applies. In the case of parameter sets this is carried out automatically and may not be changed.

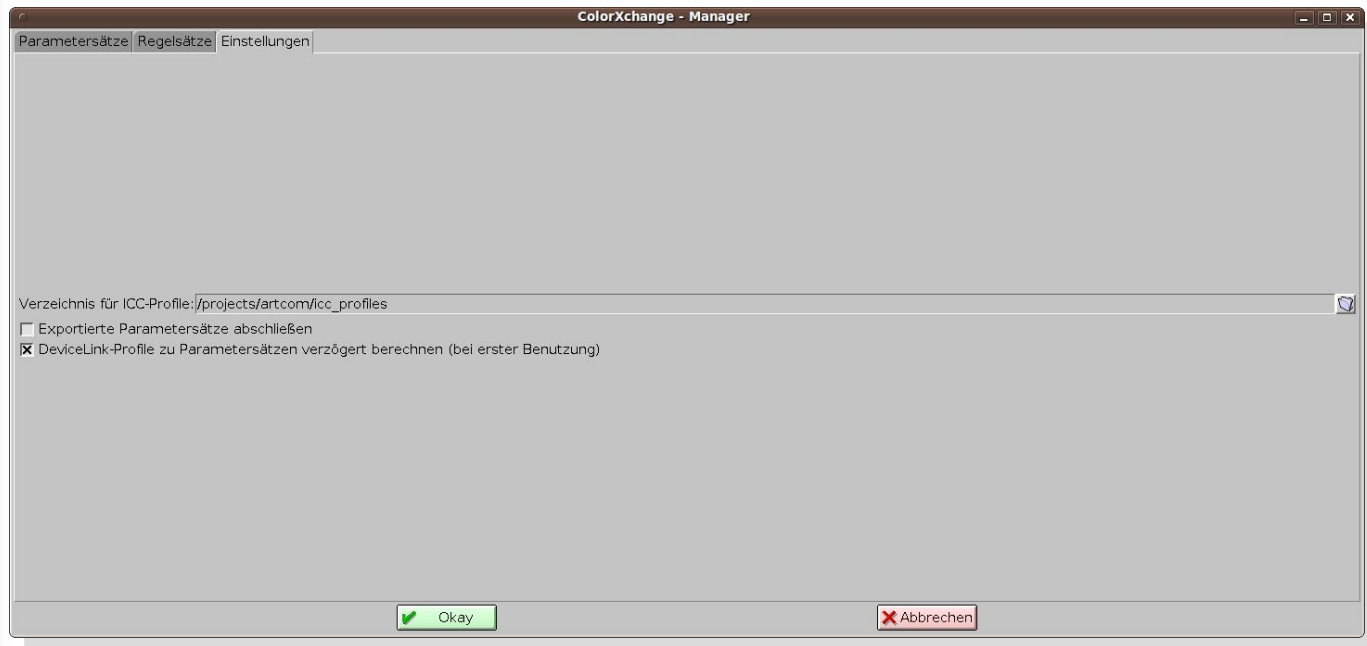
ColorXchange Manager

Rule sets

- With the „free“ transformation method you can carry out pure ICC-based transformations. This is especially useful for RGB to CMYK transformations.
- With the button „Use embedded ICC profiles“ you determine that all embedded ICC profiles are transformed to the output profile.
- With the button „Use transformation methods from PDF file“ you use only the Rendering Intent determined in the PDF file.



ColorXchange Manager Settings



- Settings for ICC profile folder (necessary for rule sets).
- Prevent created DeviceLink profile against editing by „locking“ (Export – Import).
- Turn direct generation of DeviceLink profiles on or off.

ColorXchange LinkCreator

Original image

Corrected image

New DeviceLink profile.
Automatically created from
differences between original and
corrected image.

- DeviceLink creation with edited / corrected image file.

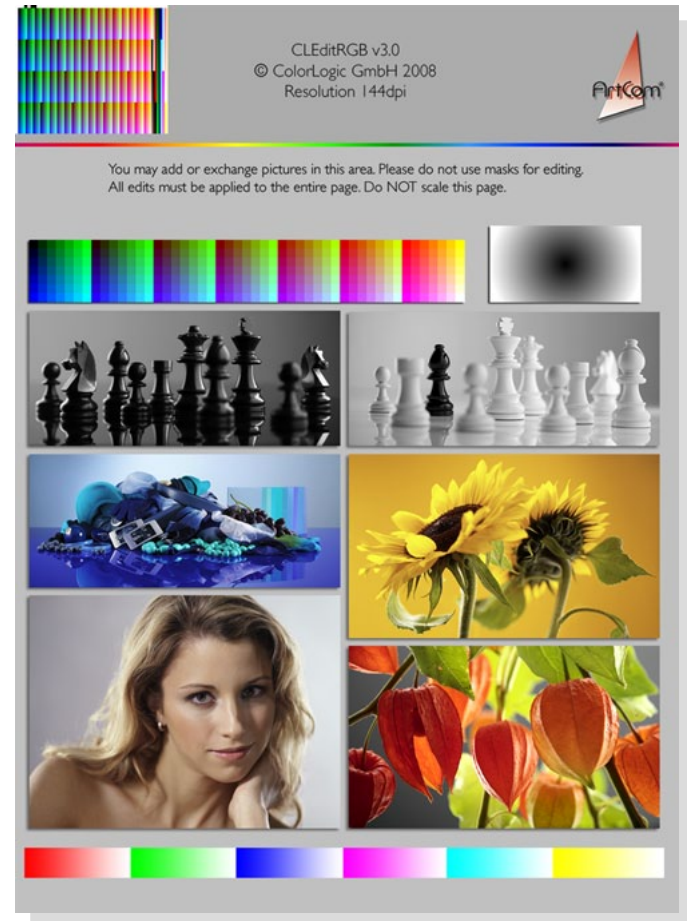
ColorXchange LinkCreator

- The **Edit module** now offers an improved precision for the CMYk to CMYK editing. In connection with the also new CMYP Edit Chart (*CLEditCMYK_Large_v31_144dpi.tif*), that includes in the top left corner an advanced CMYK recognition chart with 6642 color fields, you can both map gradation curves in the 1% range exactly and take over selective color corrections highly detailed into the DeviceLink profile.
- Hint: Use the edit chart 1:1 without ICC for the correction. You can use only global corrections.

ColorXchange LinkCreator

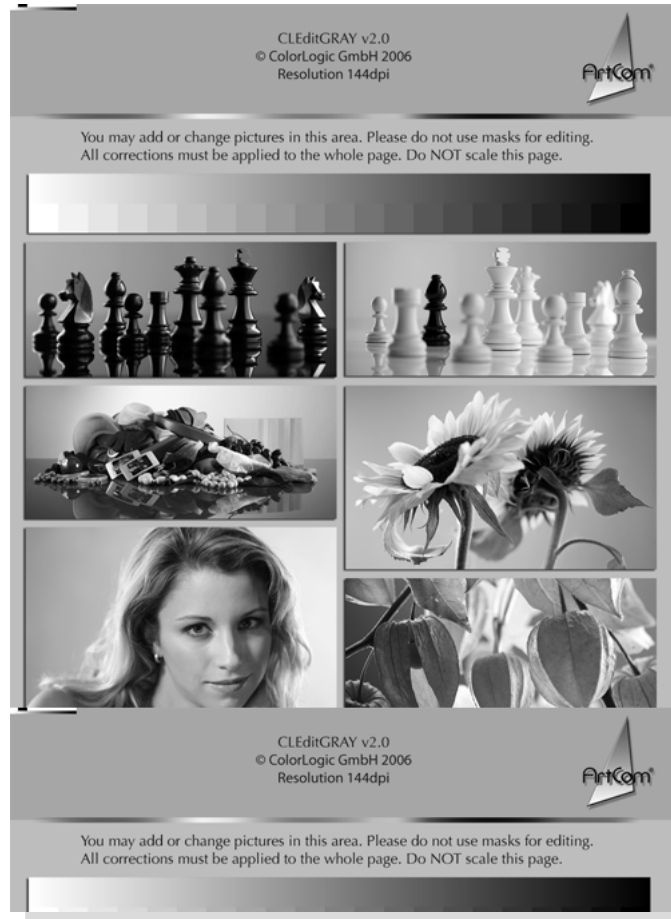


CMYK



RGB

ColorXchange LinkCreator

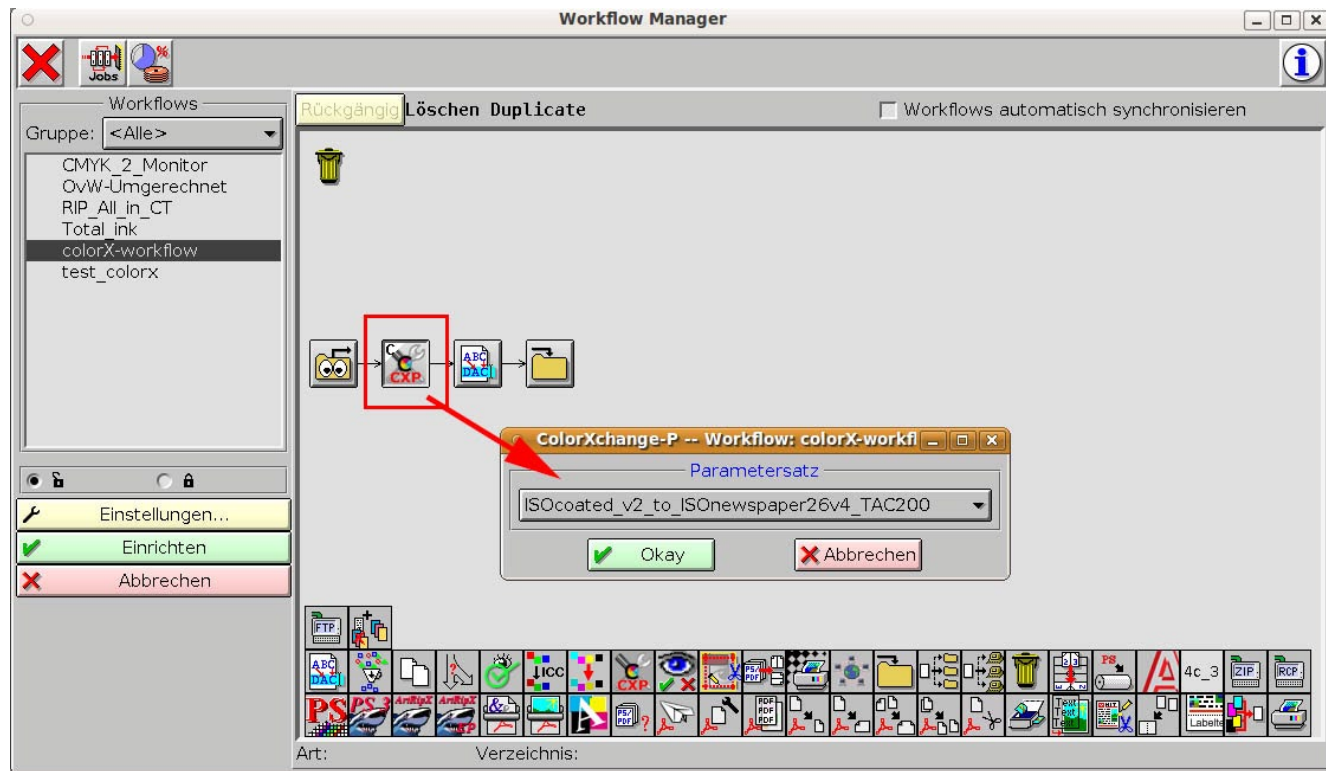


Gray

Use of parameter and rule sets

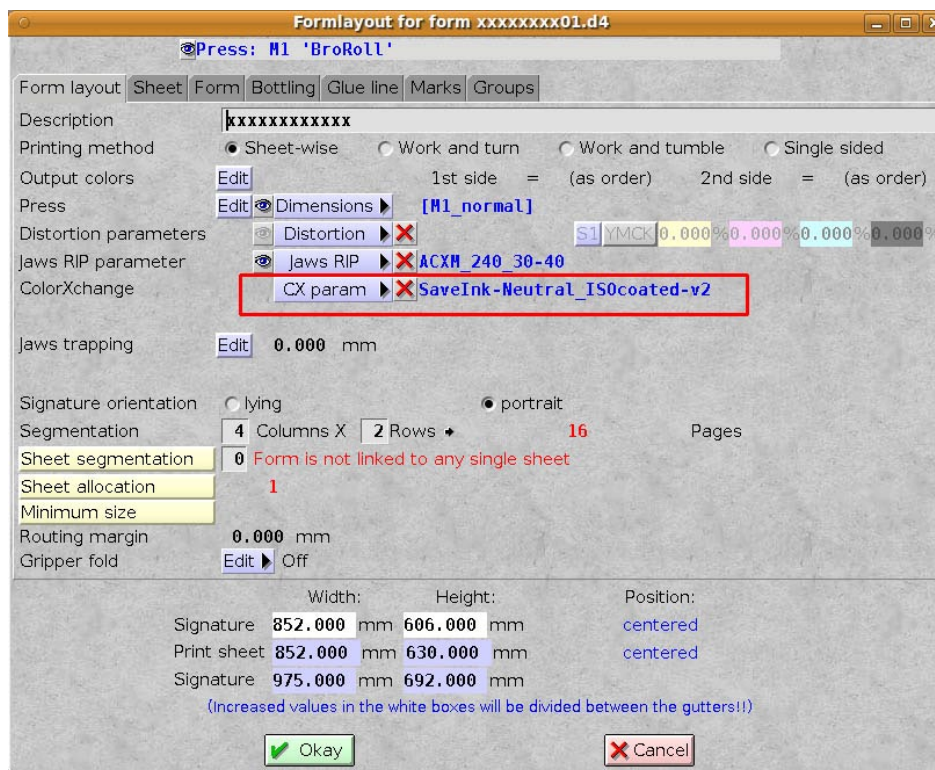
- You can use the parameter sets in the Workflow Manager and/or the Impose (depending on the settings in the ColorXchange Manager).

Use of parameter and rule sets



Use in the Workflow system. The selected transformation is carried out in the WorkflowManager.

Use of parameter and rule sets



Use in the Impose® system. The selected transformation is carried out during the export.