DeskPack PowerLayout 20

User Manual

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ESKO

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2. About DeskPack PowerLayout

The 'DeskPack PowerLayout for Illustrator' bundle offers dedicated step and repeat functionality, combined with PDF import and the ability to add dynamic marks.

It combines the following plug-ins:

- *Data Exchange* on page 31 (Free)
- *Dynamic Marks* on page 95
- *PDF Import* on page 133
- *PowerLayout Standalone* on page 141
- *Seamless Repeat* on page 158

3. Data Exchange

3.1. Introduction to Data Exchange

The Esko **Data Exchange** plug-in for Adobe® Illustrator® combines several plug-ins into one package for easier installation. The combined plug-ins are:

- *The PDF Export Plug-In* on page 31
- *The Structural Design Plug-in* on page 53
- *The Ink Manager Plug-in* on page 41
- *The Page Box Plug-in* on page 76
- *Messages* on page 84
- *The WebCenter Connector Plug-In*

Along with a combined installation, there are new features in the updated plug-ins:

- Support for OPI (Open Press Interface) server mapping in PDF Export
- A combined **Preferences** dialog for PDF Export, and TrimBox/MediaBox that also works with Shuttle and Launch Task in client-server configurations
- The ability to always save (or not save) XMP data in Illustrator documents when you save them.
- Esko Document Setup

3.1.1. Data Exchange Preferences

Update XMP on Document Save directly on the **Preferences** > **Esko** menu controls if the document's XMP data is updated when the document is saved in the .AI format or as Adobe PDF with preserved Illustrator editing capabilities, and is turned on by default. Deselecting this option results in slightly faster document saves

3.2. The PDF Export Plug-In

3.2.1. Introduction

The **PDF Export** plug-in allows you to directly export your Illustrator files to **Normalized PDF** or to **PDF+**, depending on the setting in the **Ink Manager**: see *Normalized PDF or PDF+* on page 42

3.2.2. Saving a File as Normalized PDF or PDF+

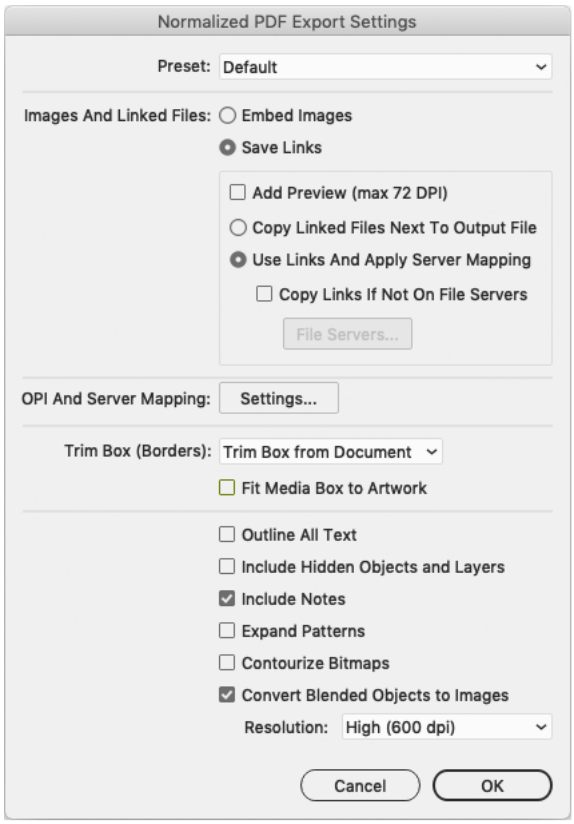
To save your Illustrator file as Normalized PDF or PDF+ using **PDF Export**:

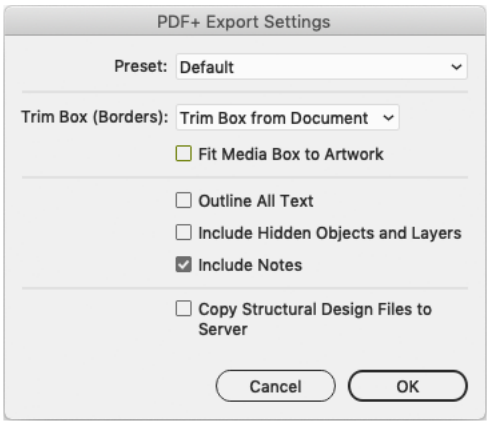
1. Go to **File** > **Export...**

2. In the dialog that opens, choose your file's name and location, and choose the **Esko PDF (pdf)** format.
3. Click **Export**.
4. In the **PDF Export Settings** dialog that opens, fill in the export settings (see *PDF Export Settings* on page 32).
5. Click **OK** to export the file.

3.2.3. PDF Export Settings

When exporting your files to Normalized PDF or PDF+ format, you need to set the PDF Export Settings. The settings are different when exporting Normalized PDF (left) or PDF+ (right), and depend on the setting in the Ink Manager. See *Normalized PDF or PDF+* on page 42





Preset

Using **Presets** you can store and reuse the settings for the PDF Export dialog.

You can save the current settings as a Preset by selecting **Save...** and entering a name. The location for the Presets is defined in the PDF Export Preferences. See *PDF Export Preferences* on page 39

You can load a Preset by selecting it in the dropdown.

If you set the Preset to **Default**, the parameters as set in the **PDF Export Preferences** will be used. See *PDF Export Preferences* on page 39.

If the current settings are not saved as a setting, the **Preset** dropdown will show "Custom".

Images and Linked Files (only for Normalized PDF)

1. In the **Images and Linked Files** group, choose to either **Embed Images** in the Normalized PDF, or **Save Links** to the images.
   - If you choose to embed the images, you don't have any more preferences to fill in and you can just click **OK**.

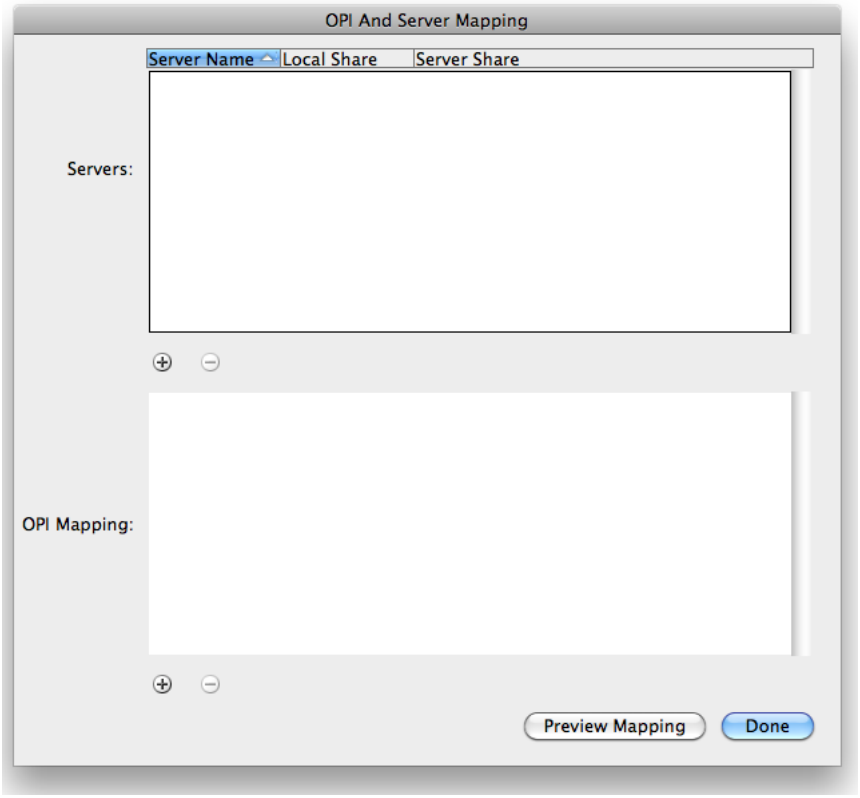
     Note: This doesn't save the images' link information (except for linked ArtiosCAD graphics, see *Linked ArtiosCAD Graphics for Normalized PDF export* on page 41).
   - If you choose to use linked images, fill in the other preferences of the dialog.
2. Enable **Add Preview (max 72 DPI)** if you want your Normalized PDF to have a low resolution preview of the linked images.

   This preview allows you to view the linked images when opening your file in Acrobat™ for example.
3. Choose where to copy the linked images:
   - Choose **Copy Images Next To Output File** to copy them next to the folder in which you will save the Normalized PDF (so other applications like **ArtPro** or **PackEdge** can still open them when the links are broken).
   - Choose **Use Links And Apply Server Mapping** to keep the images where they are but update the links (for example if the images are in a shared folder located on a different machine).
4. When choosing **Use Links And Apply Server Mapping**, fill in a Server Mapping if the share names on the client machine and on the other server do not match.
   a) When checked, **Copy Links If Not On File Servers** verifies if linked images are already on fileservers and if they are not, copies them along with the exported Normalized PDF file. Choosing this option also enables the **File Servers...** button where you add the machines that store linked images so that Esko workflow servers can find them.

   For more information, see *What is a Server Mapping?* and *Adding a Server Mapping*.

OPI and Server Mapping (only for Normalized PDF)

When you click the **OPI and Server Mapping Settings** button, either in the **PDF Export Settings** or in the **PDF Export Preferences**, the **OPI and Server Mapping** dialog appears:



Note:

This dialog is available only when you have chosen to Save Links in exported Normalized PDF files. When you export a Normalized PDF, OPI Mapping is applied first and then Server Mapping.

Servers

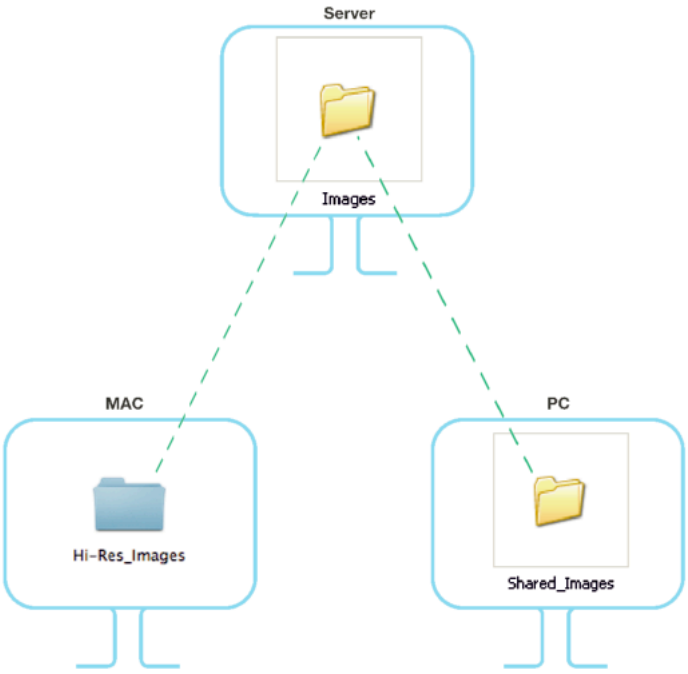
The top pane of the dialog configures **Server Mappings**. You need to use Server Mappings when the Normalized PDF you output:

- has linked images that are located on a different machine (file server),
- will be used on another machine (not your local machine or the file server).

Server Mappings allow you to map the image links from one share name to another automatically on output. This ensures that the links are not broken when the Normalized PDF is used on another machine.

For example:

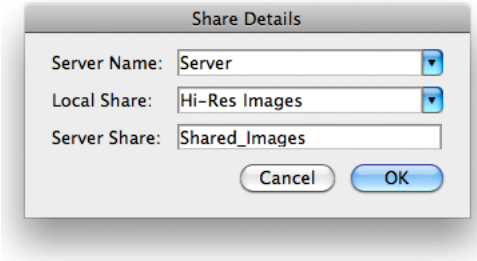
- the linked images are saved on a file server called "`Server`", in a shared folder called "`Images`",
- your copy of Illustrator with PDF Export is on a Mac, and the shared folder containing the images is mounted as "`Hi-Res_Images`".
- the Normalized PDF you export will be used on a PC, where the shared folder containing the images is mounted as "`Shared_Images`".



The link to an image called "`My_Image.psd`" is "`Server/Hi-Res_Images/My_Image.psd`" on the Mac, and should be "`\\Server\Shared_Images\My_Image.psd`" on the PC.

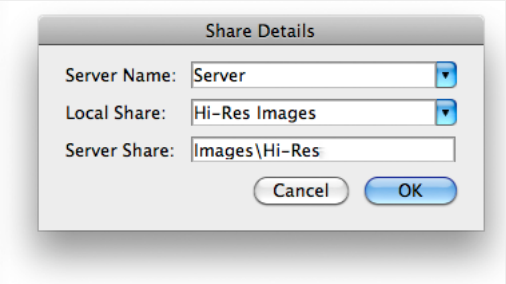
When adding the Server Mapping in the **OPI And Server Mapping** dialog, you should enter the **Share Details** as follows by:

- name of the file server in **Server Name**,
- name of the shared folder containing the images as seen from your local Mac in **Local Share**,
- name of the shared folder containing the images as seen from the other PC in **Server Share**.

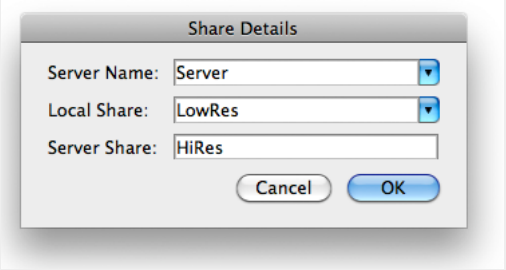


Note:

- You can use subfolders in a Server Mapping.

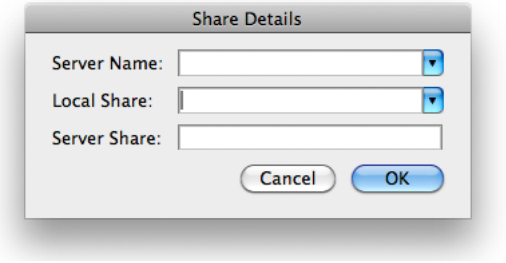


- You can also use Server Mappings to replace images (for example to swap low-resolution for high-resolution images **when the low-resolution and high-resolution images have identical separations**).

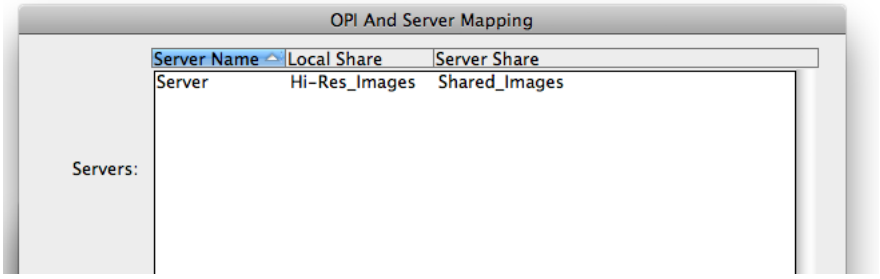


To add the Server Mapping, do the following:

1. In the **OPI And Server Mapping** dialog, click the plus sign button to the lower left of the Servers pane. This opens the **Share Details** dialog.



2. Enter or choose the name of the file server containing your linked images in **Server Name**.
3. Enter or choose the name of the file server's share containing your linked images **as it appears on your local machine** in **Local Share**.
4. Enter the name of the file server's share containing your linked images **as it appears on the other machine that will use your Normalized PDF** in **Server Share**.



5. If you want to add another Server Mapping (to use your Normalized PDF on yet another machine), repeat steps 1 to 4.

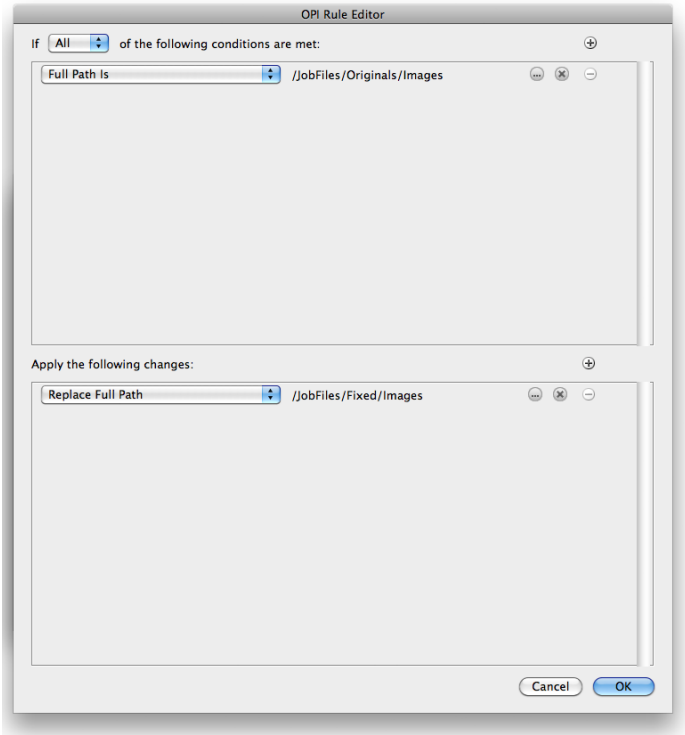
To edit a Server Mapping, double-click it. To remove a Server Mapping, select it and click the minus button to the lower left of the Servers pane.

OPI Mapping

The lower half of the **OPI And Server Mapping** dialog configures **OPI Mapping**, which defines the rules for image substitution when exporting a Normalized PDF in a more specific way than Server Mapping. OPI stands for Open Press Interface.

To add an OPI mapping, do the following:

1. Click the plus sign to the lower left of the list pane. This opens the **OPI Rule Editor** dialog.



2. After the word **If**, decide how many conditions that must be true for this mapping rule to take effect: **All**, **Any**, or **None**.
3. For the condition In the top pane of the dialog, choose the element of the image file's path to examine in the first field. Image paths are in URI (Uniform Resource Identifier) format, such as file://mymac/MacHD/images/lowres/tests/Spacebar_CMYK.eps. As you select elements, further

controls appear on the same line to refine the condition. For example, if you choose Full Path Is, you can click **...** to browse for a folder, or click **x** to revert to the previous folder. To add a condition, click **+**; to remove a condition, click **-**.

4. Once you have defined the conditions, define the changes to the path in the lower pane of the window. Use the same process to define the changes as you did to define the conditions: choose the change, then set its options on the same line. To add a change, click **+**; to remove a change, click **-**.
5. Click **OK** to finish defining the rule.
6. To add another rule, click **+**; to remove a rule, click **-**.

Consider again this example URI file name: file://ImageServer/LOWRES/images/lowres/tests/Spacebar_CMYK.eps.

- The condition **Extension**, **Is Equal To**, EPS will match.
- **Folder Name**, **Starts With**, lowres/ will match. You can specify the text ending with / to state that it must be the entire Folder name and to make sure that directories starting with (for example) `lowres plus/` will not match.
- **Server Name**, **Is Equal To**, `imageserver` will also match as the case is not compared.

When you use more than one condition in a rule, the **Replace 1st Matching Part Of Path** and **Replace 2nd Part Of Matching Path** changes become effective.

Consider this file: `file://Serv/SharedImg/LORESIMAGES/ANIMALS/LOWRES/myimage.eps`

- with conditions of **Folder Name**, **Contains**, `LORESIMAGES`, and **Folder Name**, **Contains**, `LOWRES`.
- and changes of **Replace 1st Matching Part Of Path**, `HIGHRESIMAGES`, and **Replace 2nd Part Of Matching Path**, `HIGHRES`.

The first change will replace `LOWRESIMAGES` with `HIGHRESIMAGES` (since it was first), and the second change will replace `LOWRES` with `HIGHRES`.

Notes and Restrictions

To copy the OPI settings between computers so they all are the same, copy `AE10-OPISettings.prefs`. In Windows, that file can be at `C:\Documents and Settings\username\AppData\Roaming\Adobe\Adobe Illustrator CSx Settings`, but its exact location depends on the type of login (local or domain) and Illustrator version (CSx where x is a number). On the Mac, this file is normally in `Users/username/Library/Preferences/Adobe illustrator CSx Settings/`. Copy the file to the same location on the target machines.

There are a few restrictions when using OPI Mapping:

- The high-resolution images must be accessible from the client workstation.
- Ink Manager will not show extra inks that are present in the high-resolution images.
- When exporting the file using Shuttle, only the inks from Ink Manager are shown, not any extra ones present in the high-resolution images.
- PDF Export, Viewer for Illustrator, and PowerTrapper Client and Standalone will use the high-resolution images and will know about any extra inks.

Trim Box and Other Settings

In the **Trim Box (Borders) group** of the **PDF Export Preferences** dialog, the **Trim Box (Borders)** drop-down list lets you choose how the edge of the exported PDF file is chosen: using the **Trim Box from Document**, using the **Current Artboard**, or by using the **Artwork Bounding Box**.

Fit Media Box to Artwork expands or shrinks the Media Box as appropriate.

Outline All Text converts all text to outlines.

Include Hidden Objects and Layers includes hidden objects when the PDF file is exported.

Include Notes allows to include annotations in the PDF. This option is only available in combination with the PDF Import plug-in.

Copy Structural Design files to Server (only PDF+)

If the **Copy Structural Design files to Server** option is enabled, when you export your PDF+ to an Automation Engine server, the Structural Design files used in your document will be exported next to your PDF+ file.

Other (only Normalized PDF)

If **Expand Patterns** is selected, patterns will be replaced by actual objects. The path containing the pattern fill, will then be filled with the objects as defined in the pattern.

Contourize Bitmaps will convert 1-bit images (linked or embedded) into vectors.

Convert Blended Objects to Images will convert blended objects to images. You can set the resolution for this images to High (600dpi), Medium (300dpi) or Low (150dpi)

Note: In case of converting blended objects with different oveprint setting (one is overprinting, the other is not), the convertion might change the final result. The following message is shown: "Rasterized Blend combines art in overprint and not in overprint mode. Rasterization may have caused changed appearance."

3.2.4. PDF Export Preferences

You can open the PDF Export Preferences by choosing **Illustrator** > **Preferences** > **Esko** > **PDF Export Preferences**

The main part of the Preferences contain the same settings as the PDF Export Settings: the **General** tab contains settings used for Normalized PDF and PDF+, the **Normalized PDF** tab contains settings only used when exporting Normalized PDF, and the **PDF+** tab contains settings only used when exporting PDF+.

The settings in the Preferences will be used if the "Default" preset is selected. See *PDF Export Settings* on page 32

The **PDF Export Preset Settings Folder** defines the location where the Presets are saved: either the Default Preference Folder, or a custom folder you can select by clicking the **Browse...** button. See also *Preset* on page 32

3.2.5. Linked ArtiosCAD Graphics for Normalized PDF export

When you export a document with linked ArtiosCAD graphics to Normalized PDF, the graphics are treated slightly differently:

When choosing "Embed Images" in the Preferences:

- The ArtiosCAD graphics are embedded in your Normalized PDF.
- The original link information is **saved** in your Normalized PDF.

When choosing "Save Links" in the Preferences:

- The ArtiosCAD graphics are **embedded** in your Normalized PDF.
- They are also **copied** to the location you define: **Next To Output File** or on another server (according to a **Server Mapping** if defined).
- The link to the copied graphics is saved in your Normalized PDF.

3.3. The Ink Manager Plug-in

3.3.1. Using the Ink Manager palette

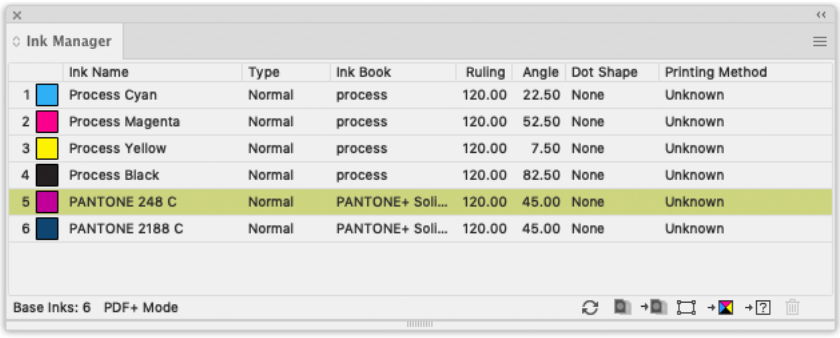
The Ink Manager palette is a powerful pre-press color editing and proofing tool. Easily identify where Pantone colors are used within a document or where custom spot colors can be found, then convert these colors to a custom spot color or to process colors.

The Ink Manager palette also allows you to specify crucial ink parameters such as the ink type, angle and lineature. Once defined, these parameters are saved inside the Illustrator document.

Note:

Screening for Illustrator allows you to make exceptions to these ink parameters. With Screening for Illustrator objects can have different settings for ruling, angle and dotshape. Please refer to the Screening for Illustrator documentation for more information.

To use the Ink Manager palette, choose **Window** > **Esko** > **Ink Manager**. The Ink Manager palette appears.



Mode: in the bottom left corner, you can see if you are working in PDF+ Mode or Normalized PDF Mode. See *Normalized PDF or PDF+* on page 42

Delete Ink Variant. To delete an Ink Variant made with Screening for Illustrator, select the ink variant which needs to be removed and click the 'Delete Ink Variant' button. The objects will get the ink settings of the parent ink.

Refresh. To update the lists of inks used within your document, click the Refresh button. After modifying a document, click the refresh button to update the list of used inks.

Select. To identify objects containing specific inks within a job, select the ink you wish to search for and click the 'Select' button. It is possible to select more than one ink at a time.

Convert to Other. To convert a selected ink from your document Ink list to another ink, click 'Convert to other'. More than one ink can be selected at a time.

Note:

Converting an ink will affect only line art. However, if you have the Channel Mapping or Color Engine plug-in installed and licensed, converting an ink will also result in the corresponding channel mapping for all images. See the Channel Mapping documentation for more information.

Convert to CMYK. To convert a selected Spot Color from your document Ink list to a Process Color Mix, CMYK, click 'Convert to CMYK'. More than one ink can be selected at a time.

Note:

Convert to Other and Convert to CMYK are only available if you have a license for boostX, Channel Mapping or Color Engine Plugin.

Show Processing Steps Palette and **Move to Processing Step** (only available when working in PDF+ Mode. See *Processing Steps* on page 48

3.3.2. Normalized PDF or PDF+

In the Ink Manager, you can switch between working in Normalized PDF or PDF+ mode. This mode determines what type of PDF fil you want to export your document to.

If you open a document that contains Technical Inks or Varnish Inks, the mode will be set to Normalized PDF.

If you open a document that contains Processing Steps, the mode will be set to PDF+

If you open any other document, the mode will be set according to the default setting in the Ink Manager Preferences. See *Ink Manager Preferences* on page 51

You can switch freely between Normalized PDF and PDF+ mode. However, if you switch, specific functionality might get lost. If you for example switch from PDF+ to Normalized PDF, all Processing Step information will get lost, and switching back to PDF+ will not bring it back.

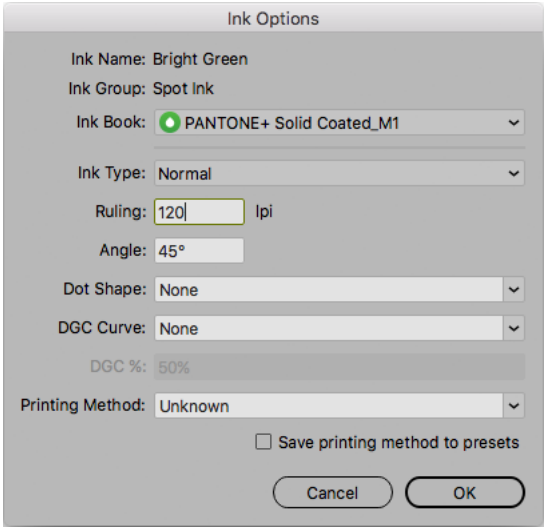
What is the difference between regular PDF, PDF+, and Normalized PDF

Both PDF+ and Normalized PDF are to a large extent regular PDF files that you can open and edit in any other PDF editor or reader. However, PDF+ and Normalized PDF files also contain additional information, available to any Normalized PDF or PDF+ compatible editor. Both file formats also implement specific limitations and specifications.

What	PDF+	Normalized PDF
Ink order stored in file	✓	✓
Non-printing data (Cut, Die, ...) and special processing steps (varnish, ...)	Processing Step Layers	Technical Inks & Varnish
Ink Types	Normal, Opaque	Normal, Opaque, Technical, Varnish
Document Profile as output intent	Obligated. If none is present, the default profile will automatically be added when saving.	
Screening	Optional object based screening	Default screening is applied to all unscreened objects when saving.
Group and Barcode metadata	✓	✓
Marks	PDF+ Marks can be applied in ArtPro+	✗ ArtPro+ does not support SmartMarks
Images	Images can be • **Embedded** • **Linked & Embedded**. If a PDF + file contains image links, a full resolution embedded version of the image will still be saved in the file.	Images can be • **Embedded** • **Linked**
Placed Art (PDF)	✓	✗

What	PDF+	Normalized PDF
Structural Design	✓	✓ Limited to one Structural Design file, and always using the default Profile

3.3.3. Ink Options



Double-click an Ink from the list to open the associated Ink Options dialog. There you can specify the Ink Type, Lineature, Angle and Dotshape of the selected ink.

If you have multiple inks selected, you can change the properties of all the inks at the same time. The dialog will show "≠" for settings that have different values.

The **Ink Book** dropdown contains all Ink Books that have the current ink defined. By default the last used ink book is shown.

When working in PDF+ Mode, the available **Ink Types** are Normal and Opaque. When working in Normalized PDF Mode, also Varnish and Technical are available. The ink type for process inks cannot be changed. The ink type is always normal. The following Pantone inks are always opaque inks: Pantone 8003 C, Pantone 8021 C, Pantone 8062 C, Pantone 8100 C, Pantone 8201 C, Pantone 8281 C, Pantone 8321 C, Pantone 871 C, Pantone 872 C, Pantone 873 C, Pantone 874 C, Pantone 875 C, Pantone 876 C, Pantone 877 C. The ink type of these inks cannot be changed.

Note: If you change an Ink to **Technical** or **Opaque**, the ink will be moved to the bottom of the Ink list. If you change the ink order afterwards, this new order will be respected.

Dotshape shows a list of all dotshapes available for the FlexRip. However, it is possible to enter any dot that is available on your rip instead of the proposed dotshapes. Only use a dotshape that is installed on the rip that will be used to expose the document.

Note: Entering a dotshape is not compatible with Nexus RIP.

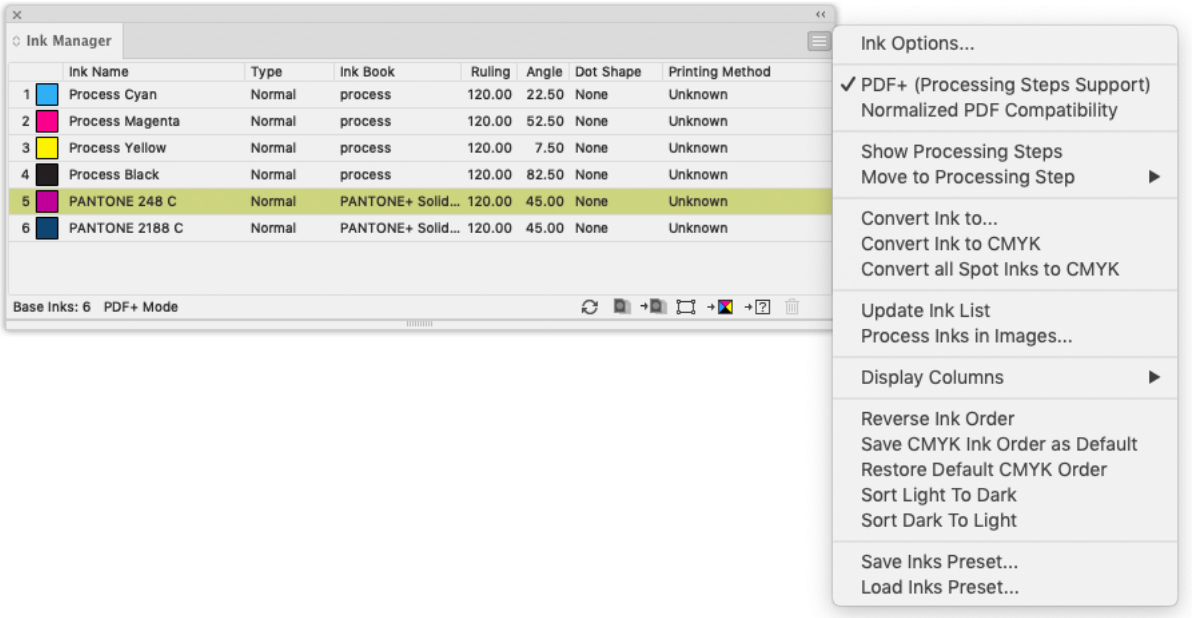
You can define a DGC Curve and a DGC percentage. See *DGC Curve* on page 48

You can define the **Printing Method**. See *Printing Method* on page 47

You can define the **DGC Curve**. See *DGC Curve* on page 48

These Ink options are stored in the Illustrator document and are used by other DeskPack plug-ins like PowerTrapper Client, PowerLayout Client, etc. For example, PowerTrapper Client will ignore varnish and technical inks and will take the opaqueness of inks in account when determining trap directions.

3.3.4. The Ink Manager flyout menu



- **Ink Options...** opens the ink options dialog.
- **PDF+ (Processing Steps Support)** or **Normalized PDF Compatibility**: see *Normalized PDF or PDF+* on page 42
- **Show Processing Steps** and **Move to Processing Step**: see *Processing Steps* on page 48
- **Convert Ink to...** has the same functionality as the 'Convert to Other' button
- **Convert Ink to CMYK** has the same functionality as the 'Convert to CMYK' button
- **Convert all Spot Inks to CMYK** converts all the spot inks in the document to their CMYK equivalent.

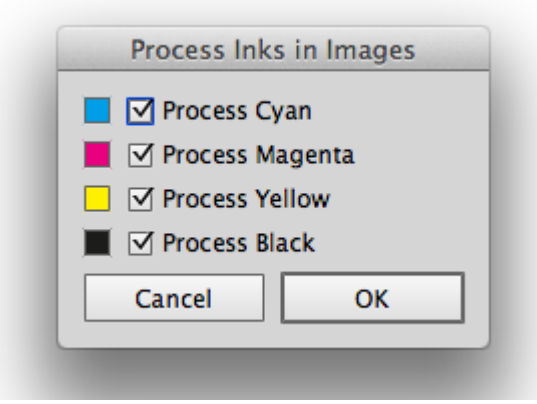
  Note:

  Keep in mind that this function will also convert white objects created by the White Underprint plugin, using a special spot ink.

- **Update Ink list** refreshes the ink list.
- **Process Inks In Images...** The plug-in uses Illustrator to determine which inks are used in external images. Illustrator has some limitations:

- With linked EPS images it is not possible to detect whether CMYK was used in the linked image. Ink Manager will assume that CMYK is present in the linked EPS images, unless the user has specified otherwise.
- TIFF images with spot channels always have CMYK channels, even if those channels are empty.

So with externally linked images, the plug-in doesn't really know whether CMYK is used. "Process Inks in Images" offers a manual solution. If you click this option, the "Process Inks in Images" dialog box appears:



By default all toggles are switched on, which means that the plug-in will assume that external images contain cyan, magenta, yellow and black.

If you know that there is no cyan in the externally placed images, you can switch Process Cyan off. Click 'Apply' and at the bottom of the Ink Manager the indication "Disabled in Images: C" will appear.

The plug-in will assume that only magenta, yellow and black were used in the externally placed images. If cyan is used in other objects of the document, it will be listed in ink manager.

- Using **Display Columns** you can set what columns of the Ink Manager should be shown: the Ink Type, Ink Book, Screening Details (LPI, Angle and dotshape), DGC Curve (see *DGC Curve* on page 48), Printing Method (see *Printing Method* on page 47) and Job Setup (see *Job Setup* on page 47)
- **Reverse Ink Order** will turn the order of the inks upside down.
- By default, the process colors are in Cyan - Magenta - Yellow - Black order. If you change this order and apply **Save CMYK Ink Order as Default**, the changed order will be used as default order. By selecting **Restore Default CMYK order**, the original default order is restored.
- By using **Sort Light To Dark** or **Sort Dark To Light**, you can rearrange the order of inks based on the luminocity. Note that Opaque and Technical inks are placed at the bottom of the list, but also sorted light to dark or dark to light.
- If you have to reuse the same Ink Parameters frequently, you can use **Save Ink Preset ...** to save all ink parameters, including Ink Name, Type, Ink Book, Ruling, Angle, Dotshape, DGC and Printing Method. You can **Load Ink Preset...** to overwrite all ink parameters in the current document with the parameters you saved earlier. You can set the location for the saved Ink Presets in the Preferences. See *Ink Manager Preferences* on page 51
- By enabling **Use Properties from Job Setup**, the inks and ink parameters defined in the Job Setup will be enforced. See *Job Setup* on page 47

3.3.5. Printing Method

You can set the **Printing Method** for every ink.

The **Printing Method** information can be used in SmartNames, or for Automation Engine task that handle the printing method.

By default, the Printing Method column is hidden. By selecting **Show Printing Method** in the fly-out menu you can make it visible.

You can change the Printing Method in the Ink Manager palette.

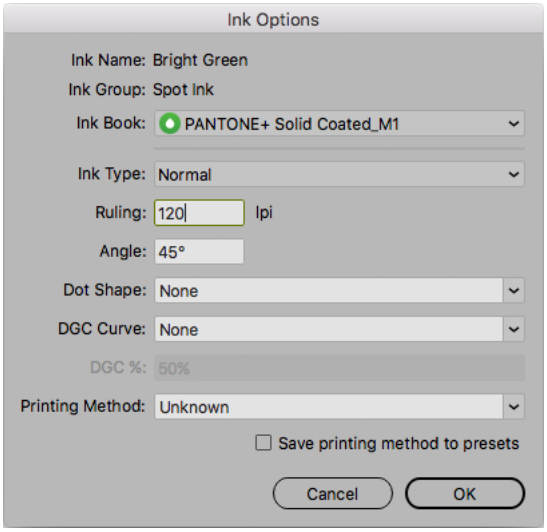
You can select one of the predefined printing methods, or create a new printing method.

Presets

As from version 12.1.2, when connected to an Automation Engine Server, the list of Printing Methods is loaded from the Automation Engine server.

Note: This implies that Printing Methods saved in earlier versions of Deskpack are no longer visible and will need to be redefined.

Printing Methods can be saved in the Automation Engine Configure tool, or in the Ink Options by selecting **Save to presets**



If there's no connection to an Automation Engine, the presets are saved locally in the Adobe Illustrator Preferences.

3.3.6. Job Setup

When a document is opened from an Automation Engine Job using **File** > **Job Folder** > **Open from Job Folder ...**, you can force Ink Manager to use the ink parameters defined in the Job Setup, overwriting

the current Ink Paramters, by enabling **Use Properties from Job Setup**, either from the fly-out menu or by clicking the button in the Ink Manager palette

The **Job** column will appear automatically. You can change its visibility under **Display Columns** in the fly-out menu.

The column will give a status icon for every ink:

- : the ink is defined in the Job Setup. The parameters defined in the Job Setup will be used.
- : the ink is not in the Job Setup but is used in the document
- : the ink is defined in the Job Setup but not used in the document. The line will be greyed out, and have no number.

If **Use Properties from Job Setup** is enabled, the Ink Options dialog for inks defined in the Job Setup will show status icons for every paramter:

- : the parameter is taken from the Job Setup, so it can't be modified.
- : the parameter is not defined in the Job Setup, so it can be set freely.

3.3.7. DGC Curve

You can set the **Dot Gain Compensation (DGC) Curve** for every ink.

By default, the DGC Curve column is hidden. By selecting **Show DGC Curve** in the fly-out menu you can make it visible.

You can change the Dot Gain Curve in the Ink Manager palette.

You can select one of the predefined Dot Gain Curves, or type in the name to use a custom DGC. When selecint a PressSync curve, you can enter the percentage for the curve in the **DGC%** field.

The DGC is saved in the Adobe Illustrator document, when exporting to Normalized PDF, and when saving Ink Presets (see *The Ink Manager flyout menu* on page 45).

Note: DGC is not a part of the Job Setup. This means using **Use Properties from Job Setup** will not change the DGC, nor does changing the DGC influences the status of the job.

3.3.8. Processing Steps

Ever since PDF became the preferred file format in the graphic industry, PDF files were used not only to store the artwork to be printed, but also as a container for information related to the production process: cutting lines, dimensions, etc.

How the information was stored in the PDF file, depends on the application that was used to generate the PDF, and the preferences of the user. For example the die cut lines can be in a separation called "Die", or in a layer named "Cut". Obviously, this leads to a multiple of ad hoc methods, which leads to interoperability problems, and a complex and error-prone situation.

ISO 19593 defines a new mechanism to store objects and metadata corresponding to such processing steps in a PDF file in a standardized way.

Based on this ISO norm, the use of Processing Steps was introduced in DeskPack as **Processing Steps**.

Keep in mind however that these Processing Step Layers are only available when working in PDF+ mode. Normalized PDF mode use Technical Inks instead. See *Normalized PDF or PDF+* on page 42

Objects in Processing Step Layers

Processing Step Layers contain objects in your PDF file (a path, a text object, ...) that are associated with a specific Processing Step.

The type of Processing Step Layer can influence the properties of the PDF objects. For example, a PDF object in a Structural Processing Step Layer has to be colored in a spot color (to visualize in viewing and proofing applications). Because the objects in these Processing Step Layers should not have any influence on the final printed version (and on the plate making), this spot color should not be used for "normal" PDF objects, nor should the objects knock out other objects, or participate in transparency blending with other "normal" artwork objects.

Types of Processing Step Layers

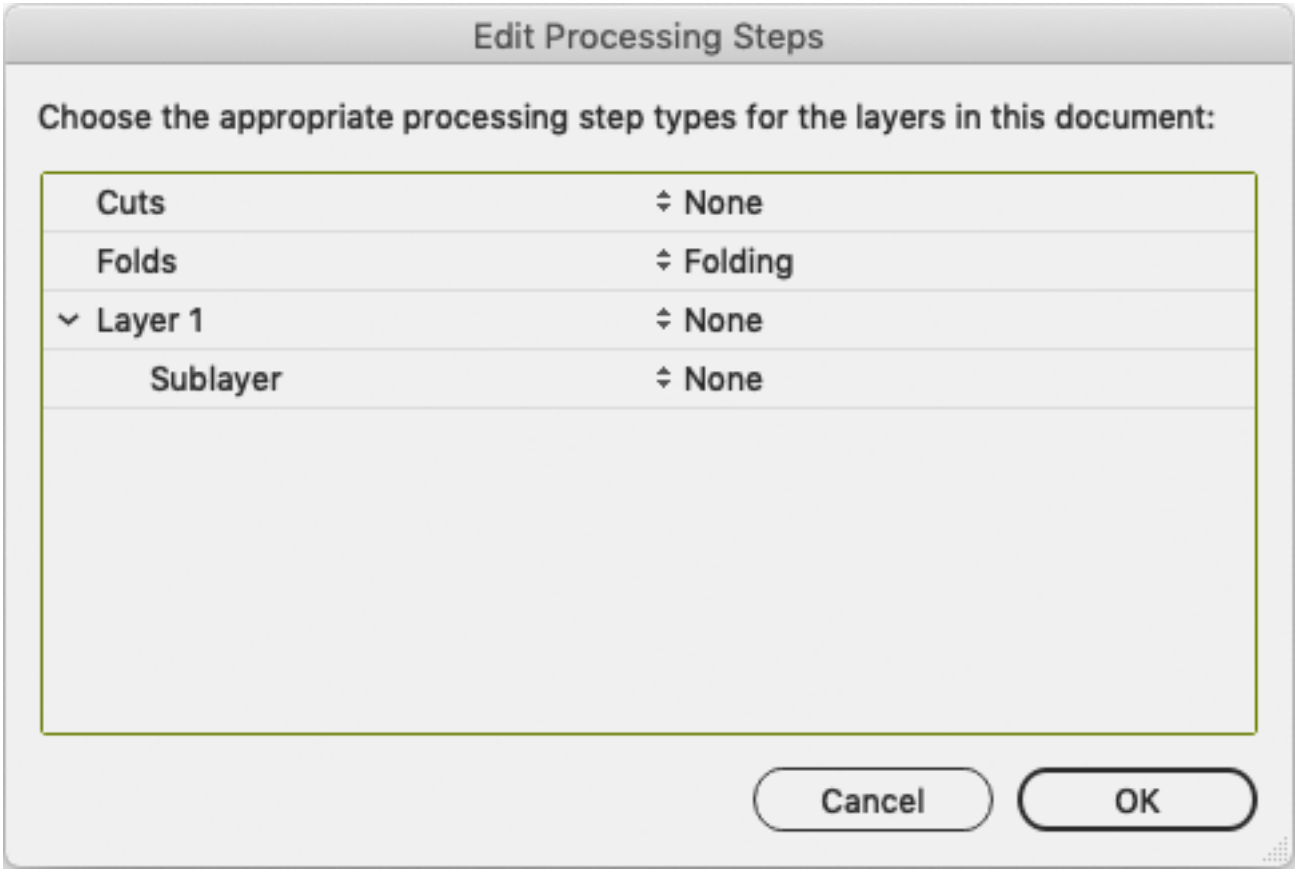
- **Structural Data**: a collection of contours that describe how the printed product will be finished to produce a 3D end product from a flat substrate, such as cutting lines, crease lines, etc.
- **Braille**: braille characters that are applied after printing, e.g. by a die cutter or inkjet device.
- **Legend**: job related data outside the boundaries of the actual printed products.
- **Dimensions**: indications of the physical sizes
- **Positions**: objects that indicate intended, allowed or forbidden positions for certain types of elements, e.g. allowed positions for content on a flap of a carton.
- **White**: white ink to be printed on a transparent or metallic substrate.
- **Varnish**: indicating the application of varnish after printing.

The Processing Steps palette

You can open the **Processing Steps palette** by clicking the Show Processing Steps button or select **Show Processing Steps** in the fly-out menu of the Ink Manager palette.

All the **Processing Steps** appear in the list, grouped per type, along with an "Artwork" entry. You can use the eye icon to make a processing step visible or invisible.

You can change any layer into a Processing Step Layer, or change the type of a Processing Step Layer by clicking the Edit Processing Steps button, by selecting **Edit Processing Steps...** in the fly-out menu, or by double-clicking an entry in the list.



You can change any layer into a Processing Step Layer, or change the type of a Processing Step Layer by selecting a Processing Step type from the dropdown.

You can change a Processing Step Layer into a normal layer by selecting **None**.

Unlike normal Artwork layers, Processing Step Layers come with a set of restrictions. If one of these restrictions is not met, a warning is shown in the Processing Steps palette.

You can select the paths causing the warnings in the list. If the **Select** option is enabled, clicking on one of the entries will select the corresponding object in the job. If the **Zoom** option is enabled, clicking an entry displays the selected object as big as possible in the active window. If the **Highlight** option is enabled, the selected objects will be highlighted.

Note: The list of ISO Standard Violations is not updated automatically. Use the **refresh** button to update the list.

You can prevent a number of these issues by using the **Move to Processing Step** function to create Processing Step Layers. See *Move to Processing Step* on page 51

Colorants for Processings

Inks that are only used in Processing Steps are considered "Colorants": they can be used to color objects in the Processing Step Layers, but are not considered printing inks, as they should not appear on plates or on the final printed result.

Colorants for Processing Step Layers are represented in the Ink Manager using a round color patch.

Note: If an ink is used in at least one "normal" artwork object in an artwork layer, the separation is shown as a normal printing separation, with a square color patch. Since the use of a separation both as ink and as colorant usually presents a conflict, it is very likely that a message will appear in the Messages Side Drawer for any Processing Step Layer using such a colorant.

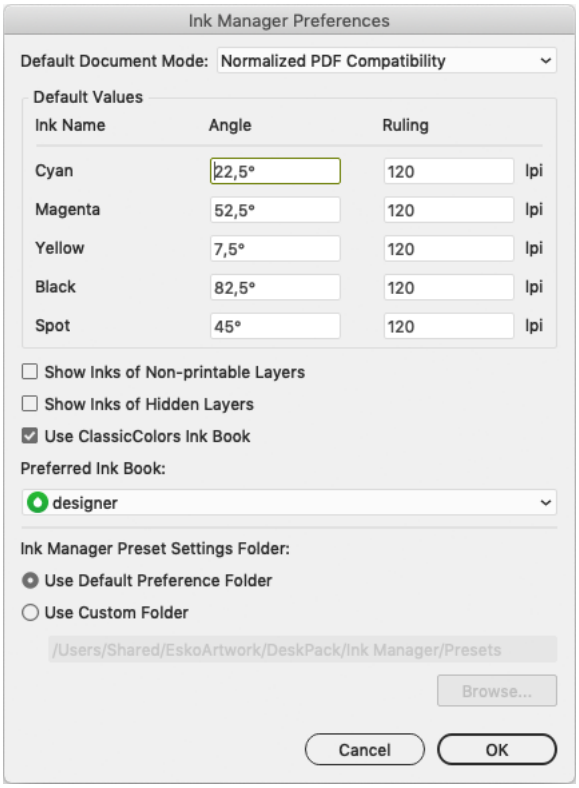
Move to Processing Step

Using the **Move to Processing Step** function, you can move the objects using a specific ink into a Processing Step.

1. Select a spot color ink in the Ink Manager.
2. Select **Move to Processing Step** from the fly-out menu or click the **Move to Processing Step** button .
3. Select the **Processing Step Layer** you want to use.
4. All objects using the selected ink will be moved to the selected Processing Step Layer.
   - Objects in a flat color, only using the selected separation, will be placed in a Processing Step Layer, with the same name as the original artwork layer they were in (when available).
   - Other objects (e.g. objects in a mixed color, images, ...) will not be moved nor changed.
   - If the Ink is only used in the Processing Step Layers, it will become a Colorant. See *Colorants for Processings* on page 51

3.3.9. Ink Manager Preferences

The Ink Manager Preferences can be opened from **Illustrator** > **Preferences** > **Esko** > **Ink Manager Preferences...** (Mac OS) or **Edit** > **Preferences** > **Esko** > **Ink Manager Preferences...** (Windows)



With the **Default Document Mode** you can define if you want to use Normalized PDF mode or PDF + mode when opening a document that doesn't contain Varnish inks, Technical inks nor Processing Steps. See *Normalized PDF or PDF+* on page 42

In the rest of the Ink Manager Preferences, you can set the **Default Values** (angle and ruling) for CMYK inks.

You can also set the default angle and ruling to be used for new Spot inks. However, these defaults can be overruled when using a Spot ink that was used before, with a different Angle and Ruling value. The Angle and Ruling for all used spot inks are saved in the Preferences file

You can also define if inks that are only used in non-printable layers or hidden layers should be shown in the ink manager by setting the **Show inks of non-printable layers** and **Show inks of hidden layers** option.

Note:

The Remap Ink functionallity also takes the **Show inks of non-printable layers** and **Show inks of hidden layers** option into account: When switched off, inks on non-printable or hidden layers will not be remapped.

Enable **Use ClassicColors Ink Book** to use the ClassicColors Ink Book. When using a ClassicColors Ink Book for your HP device, you can enable the Use ClassicColors Ink Book option, to avoid conflicts for inks using generic names, such as "White".

The **Preferred Ink Book** is the Ink book shown by default when opening the **Add Ink from Ink Book** dialog.

You can set the location to store **Ink Manager Preset Settings**: either in the default preferences folder, or in a custom folder you choose.

3.3.10. Known limitations

Since DeskPack Suite 10.1 Assembly 6 InkManager has been using different method for the ink converting.

The new method uses Illustrator's Appearance allowing multiple fills and stroke in a single object instead of creating temporary inks (BG Inks). Beside many advantages it brings a couple of limitations, having connection with the Illustrator limitations or behavior.

Re-mapping process inks to spot inks.

As it is impossible to simply change one of the process inks to the spot ink, the only solution is adding a new fill to the object with the new spot ink and use overprint to mix these fills together.

- Adding a brand new fill is not possible on text objects on the character level. Text objects using various inks on separate characters aren't mapped and an operator is warned.
- Re-mapping of process to spot inks on paths, using Effects on fill or stroke, will raise a warning, because adding a new fill could change the visual appearance.

Re-mapping inks in gradients

Re-mapping of the process ink to the spot ink generates a new fill due to the same reason as before.

- Let's have an example that the gradient already contains the target spot ink on one of its stops and another stop contains the process color being transformed. The re-mapping one of the process inks will add a new fill with the same gradient but with the target spot inks on the place of the process ink. In other cases the overprint will blend these two fills and produce expected visual appearance. In this particular case Illustrator will not blend these fills because both contain the same spot ink and Illustrator then ignores the overprint. An operator is informed about that.
- Similar issue comes when the object already contains two gradient fills. An operator is again warned.

3.4. The Structural Design Plug-in

3.4.1. Introduction

Introducing Structural Design

Structural Design enables the Adobe Illustrator users to read in an ArtiosCAD ARD or ACD file, an Esko flexible .bag file and/or a Collada .dae or .zae file. This structural design can then be aligned to the graphics and this alignment will be maintained in the rest of the Esko workflow (e.g. ArtiosCAD, Visualizer, PackEdge, ArtPro, Plato, RIPs). On top of that, you can create a varnish plate from the bleed outline, from the Illustrator artboard or from the bounding box of the structure automatically excluding the coating free areas.

Structural Design Export allows an Adobe Illustrator user to export contours from Illustrator to native ArtiosCAD .ard format. It also allows adding and modifying cutout windows to a loaded ArtiosCAD file.

Structural Design files in Normalized PDF or PDF+

When exporting your document to PDF+, a live link is maintained to each of the placed printable parts.

However, if you export to Normalized PDF, only the printable part that is listed first in the layers palette will be kept live, other placed printable parts will be expanded. If you want to keep a live link to your printable parts while exporting to Normalized PDF, you should break up your multi-part design in different documents, so that each document contains one printable part, and the graphics for that printable part.

For more information on Normalized PDF and PDF+, see *Normalized PDF or PDF+* on page 42

Note:

ArtiosCAD ACD files can't be handled by PackEdge, ArtPro, Plato and Esko RIPs, and can't be preserved in PDF+ or Normalized PDF export.

You can export the ACD file to separate ARD files by choosing **File** > **Structural Design** > **Export** and selecting the name of the ACD file. If you choose the option "ARD Files (One per part), each placed printable part of the ACD file will be replaced by a newly created ARD file. See *Structural Design Export* on page 63

3.4.2. Importing Structural Design files

General Principles

The Structural Design plug-in enables you to open or place Structural Design files inside Adobe Illustrator. The imported Structural Design files are linked to the Adobe Illustrator (.ai) files, but they are not embedded.

Structural Design Files and Printable parts

A Structural Design file describes a 3D scene, of which at least one part can be printed: the **Printable Part**. Different types of Structural Design files can be used:

- an **ARD** Structural Design file, created in ArtiosCAD or Studio Toolkit for Boxes, mainly used for boxes. For an ARD file, the entire box is one single printable part.
- an **ACD** Canvas file, created in ArtiosCAD, contains one or more printable parts.

  Note: Copies of the 3D Shape in ArtiosCAD will share the same printable part. In order to apply different graphics on multiple shapes coming from the same ARD file, you should import this ARD file multiple times into the canvas file. That way, each shape will have its own printable part.

- .bag files created in older versions of Studio Toolkit for Flexibles. These .bag files are also one printable part.
- **Collada** files, containing one or more 3D shapes with at least one printable part (.dae or .zae files). For Collada files, a printable part is an Esko extension. A collada file can contain one or more printable parts, such as a flexible bag, one or more labels on a bottle, a shrink sleeve, ... A Collada file can also contain non-printable parts, such as the glass bottle itself. Collada files with one or more printable parts can be created in ArtiosCAD or Studio Toolkit.

Note: More technical information on Printable Parts in Collada files can be found in the white paper you can find in the Studio documentation: *https://www.esko.com/en/support/product?id=Studio*

With the Structural Design Import plug-in, you can place printable part(s) of a Structural Design file in an Illustrator document.

Structural Design Layer

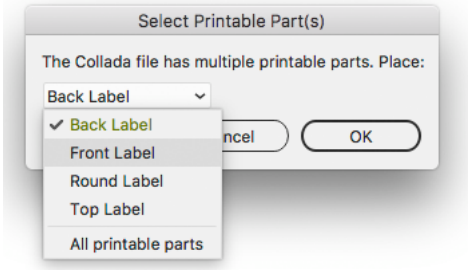
After opening or placing a structural design file, the file appears in the Adobe Illustrator layer palette. The Structural Design paths are special paths that cannot be modified accidentally. By default the Structural Design layer and its sublayers will be locked. You can unlock the Structural Design layers. This enables you to select individual Structural Design paths and use the illustrator alignment tools to align graphics to the Structural Design paths.

Open or Place an ARD, ACD, BAG, DAE, ZAE file

A dedicated **Place File** showing only Structural Design files is found in the **File** menu. Choose **File** > **Structural Design** > **Place File...**.

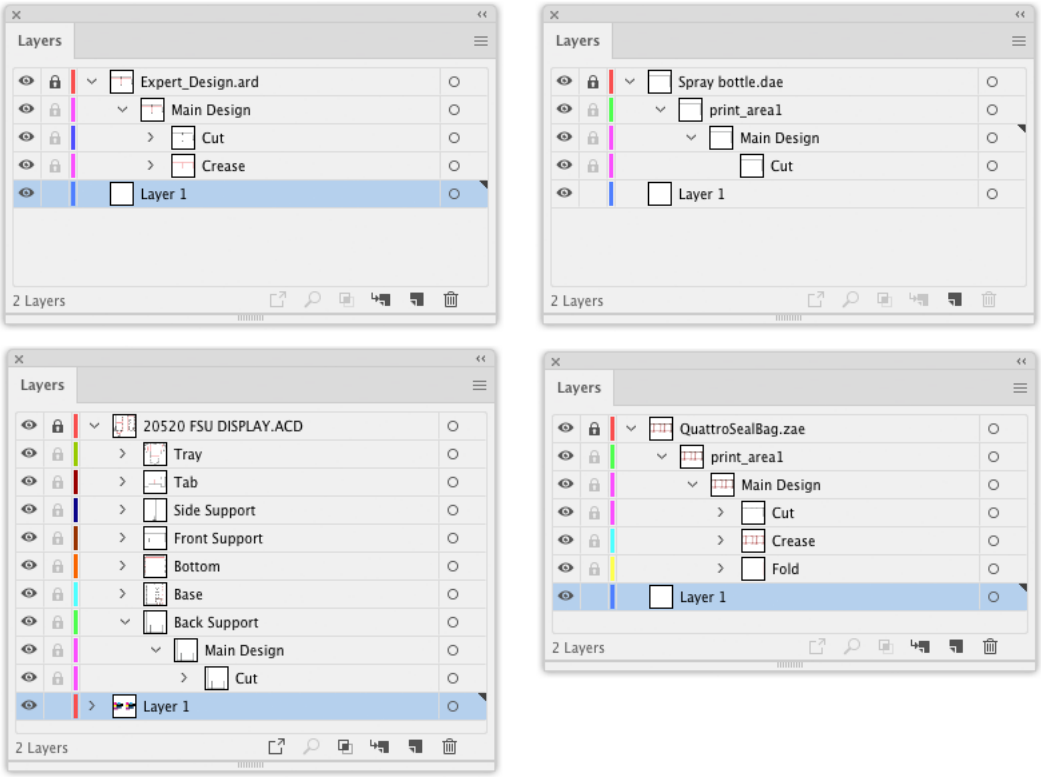
In case a Collada file is placed, a check is performed to see if the Collada file has a printable part defined. See *General Principles* on page 54

If a Collada file or ACD file contains multiple printable parts, a dialog will ask you to choose one or to place all. Choose the part(s) of which you want to create the graphics in Adobe Illustrator.

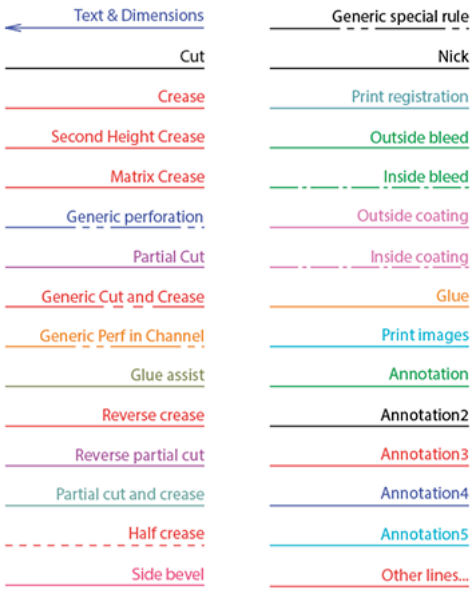


After opening a Structural Design file, the Structural Design objects are converted to special Illustrator objects.

The Structural Design layers are converted to locked Illustrator sublayers so they can't be changed accidentally. You can unlock these layers. They are grouped under a layer that gets the name of the Structural Design file.



The different Structural Design line styles (cuts, creases, bleed) are translated to hard-coded custom colors. All ArtiosCAD line styles are supported.



Opening an Illustrator file with a placed Structural Design file

When an Illustrator file is opened that contains Structural Design data, two checks are performed.

1. First of all, the plug-in checks whether the Structural Design file still can be found in its original place. If that is not the case, the plug-in will look for the Structural Design file in the same directory where the Illustrator file is. If it finds the Structural Design file there, it will use this Structural Design file instead, otherwise, you will be asked to browse to the new location of the file.
2. A second check is performed to see if the Structural Design file has been modified since it was originally embedded in this Illustrator file. If so, the Illustrator document will be updated.

See also *Update the Structural Design File* on page 59

Adding or replacing a Structural Design File

If a Structural Design file is already loaded and you place a new Structural Design file, the new Structural Design file will be placed next to the already loaded Structural Design file.

If you want to replace an already placed Structural Design file, choose **File** > **Structural Design** > **Replace**. See *Replace the Structural Design File* on page 59

Placing or opening

The difference between placing and opening a Structural Design file is that when opening a Structural Design file, the artboard will adopt the size of the bounding box of the structure. When placing a Structural Design file, the artboard will not be changed.

Large Canvas mode

In Adobe Illustrator versions before 24.2 (released june 2020), the maximum size of an Adobe Illustrator document was 5,779 by 5,779 meter or 227,52 by 227,52 inch ("standard size").

In Adobe Illustrator 24.2 and later, when creating an Adobe Illustrator document, you can use larger sizes. In that case, the document is in "Large Canvas Mode". The maximum size of an Adobe Illustrator document in Large Canvas mode is 10 times larger: 57,79 by 57,79 meter or 2270 by 2270 inch.

When opening a Structural Design file, the Adobe Illustrator document is created in regular mode. If the printable part you place doesn't fit the "standard size" canvas, you can choose to create a document in "Large Canvas Mode", and place the structural design file in the newly created large-sized Adobe Illustrator document.

Warning:

When you save or export the artwork created on a large-sized canvas to a legacy Illustrator document (lower than Illustrator 2020), the artwork will appear ten times smaller. In this case, the Structural Design Import plug-in will expand all structural design artwork. This means that the artwork will no longer be tagged as Structural Design objects, and will become regular Illustrator art. The structural design data will no longer be live in such a legacy document.

Open or Place from Shapes

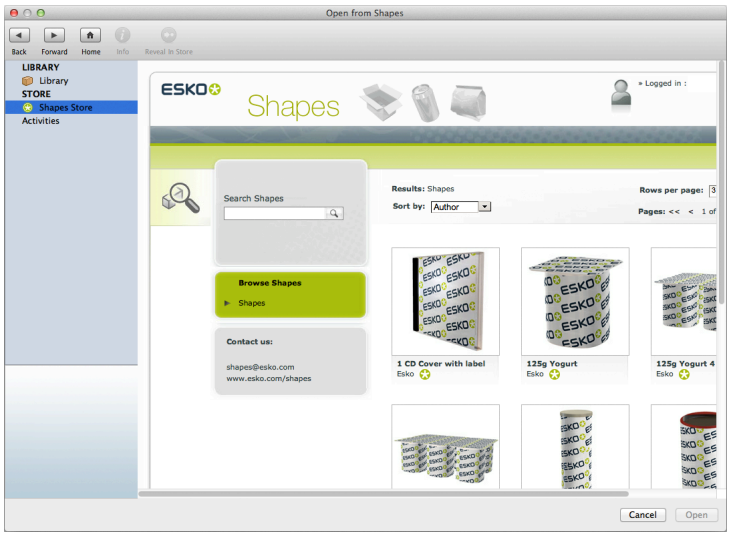
The **Shapes** Store is a constantly growing online collection of quality 3D models in Collada file format. If you have a subscription or maintenance contract for Studio or ArtiosCAD, you can download all available models. The section "free samples" are free for anyone with an Esko ID.

You can open files from Shapes directly or place them into existing Illustrator files by using the commands in **File** > **Structural Design**.

Opening and placing a file from Shapes follows the same general workflow. This example will show you how to place a Shapes file.

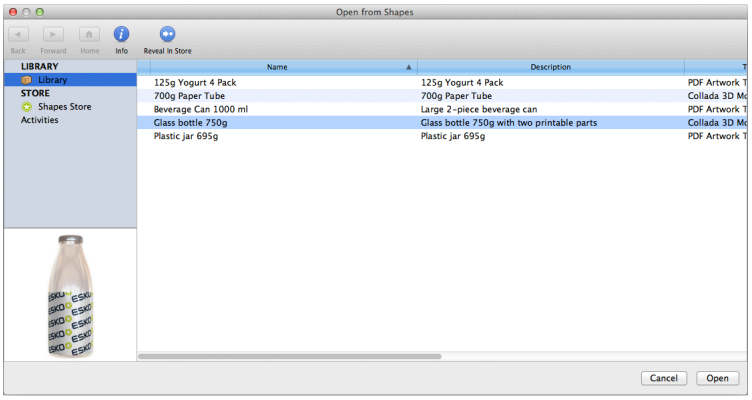
1. In an open Illustrator document, click **File** > **Structural Design** > **Place from Shapes...**.

   In order to access the Shapes store, you need to enter your Esko ID when opening the Shapes window for the first time. You can also enter it or change to a different Esko ID in the Shapes Preferences dialog in **Preferences** > **Esko** > **Shapes Preferences**.



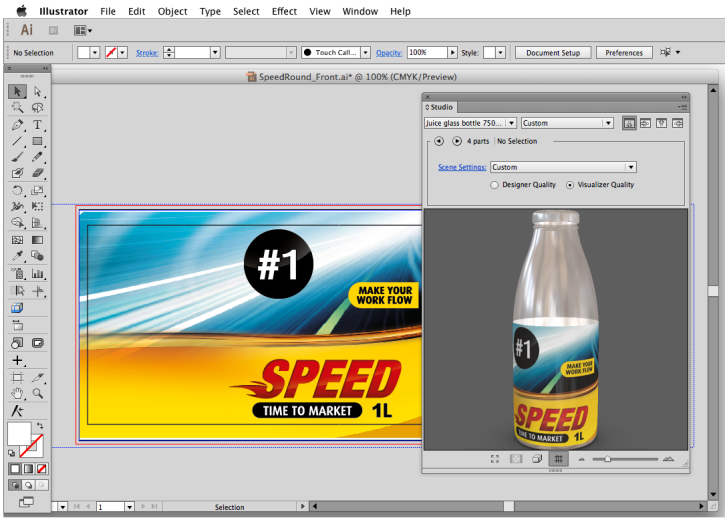
   There is a "Shapes Store" section where you can browse all the models on the cloud, and a "Library" section, where you see all the assets that you have downloaded so far. When opening the Shapes window, the last used section will be active.

2. If you want to use a new Shape, choose it and download it. It gets downloaded to your local machine's Shapes Library.
3. If you downloaded a new Shape, the Shapes window should switch to the Shapes Library automatically. To use an existing Shape, click **Library** in the Shapes window. Select the desired Shape and click **Place**.



4. The Shape is either placed in the open Illustrator document or opened as a new document. Only the printable area of the Shape is visible in Illustrator. If you have one of the Studio products, use the Studio palette to view the Shape with the printable area.

Shown below is a bottle from Shapes with the label designed in Illustrator and with the 3D model shown in the Studio palette.



Update the Structural Design File

If any of the Structural Design files has been modified while still editing the Illustrator file, an update of the Structural Design files can be forced. All Structural Design files placed in the current Illustrator document will be updated. Choose **File** > **Structural Design** > **Update All**

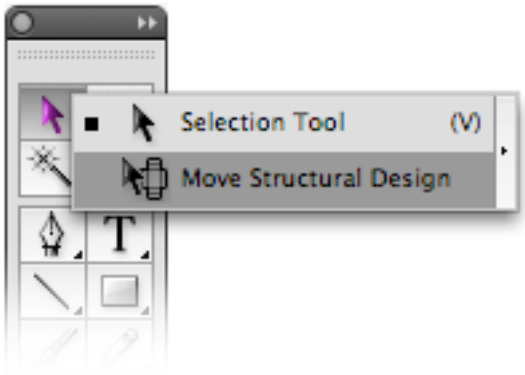
Replace the Structural Design File

If you want to replace the placed printable parts of a Structural Design file while preserving the alignment between the technical drawing and the artwork, you can **replace** a Structural Design file.

Choose **File** > **Structural Design** > **Replace** and select the name of the file you want to replace

Align Structure and Graphics

Interactive Move Structural Design tool

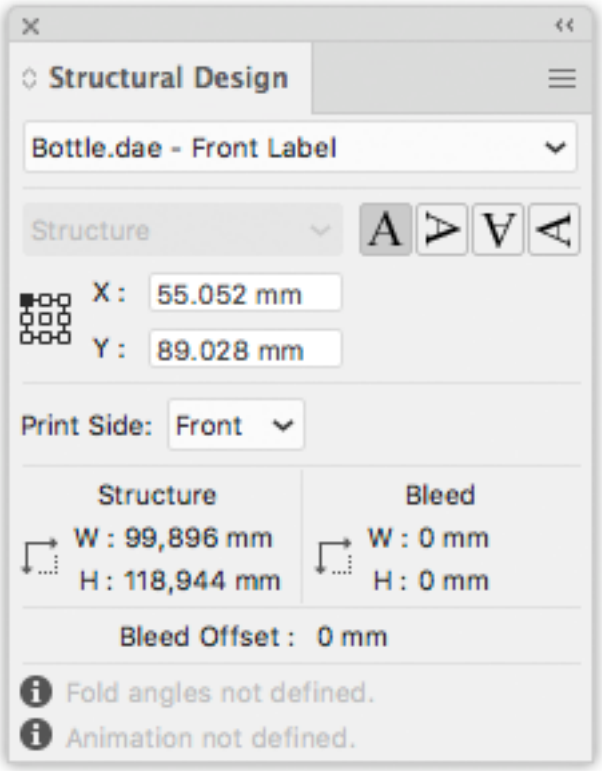


The **Move Structural Design** tool has been added underneath the Illustrator select tool. Select this tool to move the Structural Design interactively without unlocking the Structural Design layers. Hold down the mouse button and drag to move the Structural Design.

Tip:

If you choose **View** > **Smart Guides**, the Structural Design will snap to the graphics.

Structural Design window



The Structural Design palette provides information on the bleed and structure contours of the selected printable part. It allows you to rotate or numerically move the contours.

Open the palette by choosing **Window** > **Esko** > **Structural Design** > **Show Structural Design Window**.

If your document contains multiple printable parts, you can use the dropdown to select the printable part for which you want to see or change the information.

If your selected printable part contains a bleed contour, you can use the dropdown to choose whether you want to see the position of the bleed or of the structure bounding box.

The upper part gives you the coordinates of the (left, top) point of the bounding box around the structure (cut and crease) or bleed contours. The coordinates are relative to the origin of the Illustrator file. You can choose to see the coordinates of nine points on the bounding box. You can also choose to see the position of the bounding box around the bleed contour.

By entering a new value in the X and Y entry fields, you move the selected point to the new position.

It is possible to flip the Structural Design so that you can add graphics to the back of the Structural Design. This feature is enabled for ArtiosCAD files and for Collada files with a placed printable part that can have graphics applied to the back side.

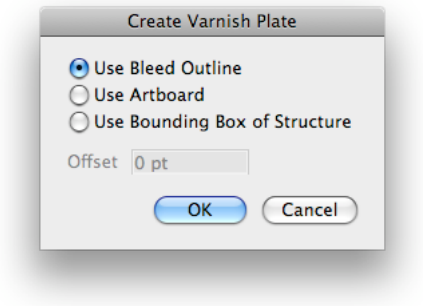
The lower part of the palette shows the width and height of the **Structure** and **Bleed** bounding boxes. **Bleed Offset** indicates the offset between the structure and the bleed contour.

The bottom part provides information whether or not fold angles and animation were defined in the structural design.

Click one of the **Rotation** icons to rotate the Structural Design contours. Rotation always happens around the center of the structure contour.

Create Varnish Plate

Choose **Window** > **Esko** > **Structural Design** > **Create Varnish Plate...**.



- If you choose **Use Bleed Outline** then the contour will be created from the bleed outline minus the coating free areas (if any).
- If you choose **Use Artboard**, then the contour will be created from the Artboard minus the coating free areas.
- If you choose **Use Bounding Box of Structure**, then the contour will be created from the Bounding Box of the structure minus the coating free areas.

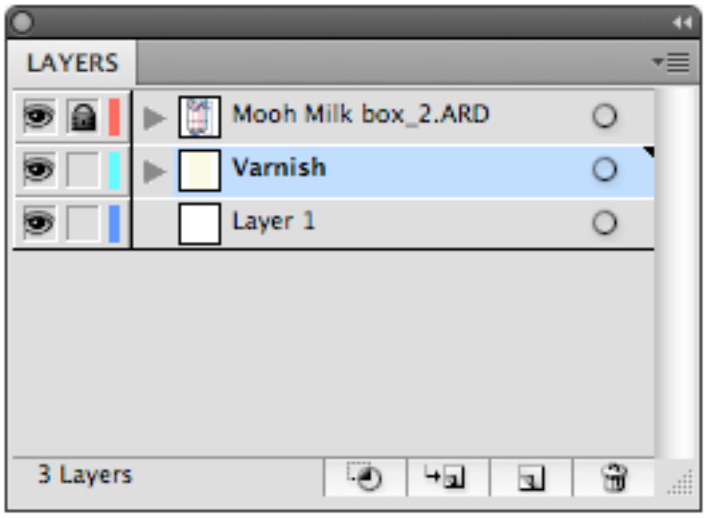
Note: When using **Use Bleed Outline** or **Use Bounding Box of Structure**, a varnish plate will be created for every printable part in the current Illustrator document.

When choosing **Use Artboard** or **Use Bounding Box of Structure**, you can specify a positive or negative offset. The resulting varnish plate will be enlarged or shrunk with the specified offset in relation to the artboard or the bounding box.

This tool outputs a contour filled with a light-yellow spot color. This contour will be put in a new layer named 'Varnish'. This layer will be inserted directly under the Structural Design layers.

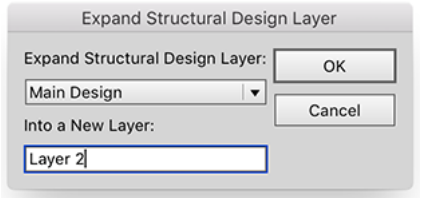
Note:

Create Varnish Plate will automatically exclude the coating free zones in the Structural Design file, if any.



Expand Structural Design Layer

Choose **Window** > **Esko** > **Structural Design** > **Expand Structural Design Layer...**.



Select the Structural Design layer that you want to expand into a new Illustrator layer. If there are multiple printable parts with a Structural Design layer with the same name, they will all be expanded.

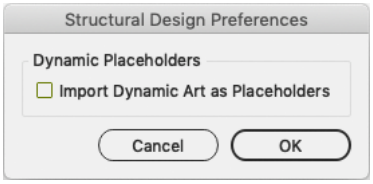
All art on the Structural Design layer will be copied to the new Illustrator layer. The art on the new layer is no longer tagged as Structural Design objects.

In Normalized PDF mode, the resulting objects are in the technical Structural Design inks. In PDF+ mode they will share the same processing step types of the corresponding layers in the Structural Design. See also *Normalized PDF or PDF+* on page 42 and *Processing Steps* on page 48.

One common use where you would use this tool is when you are interested in creating a clipping path from the bleed outline of the Structural Design file.

Structural Design Preferences

You can open the Structural Design Preferences by choosing **Illustrator** > **Preferences** > **Esko** > **Structural Design Preferences...** on MAC or **File** > **Preferences** > **Esko** > **Structural Design Preferences...** on PC.



ArtiosCAD files can contain Dynamic Art placeholders. Using these placeholders, a structural designer can for example tell the graphics designer where the barcode should be placed on the design. If the option **Import Dynamic Art as Placeholders** is enabled, and you have the **Dynamic Art** plugin installed, a live Dynamic Art placeholder object will be created for every ArtiosCAD Dynamic Art. These placeholders can then be filled automatically with their content. For more information, we refer to the Dynamic Content documentation. See *https://www.esko.com/en/support/product?id=Dynamic%20Content%20Advanced*

3.4.3. Exporting Structural Design files

Structural Design Export

The Structural Design Export saves a copy of the selected Structural Design file to a new location, The Illustrator file will link to the newly saved Structural Design file. Choose **File** > **Structural Design** > **Export** and select the Structural Design you want to export.

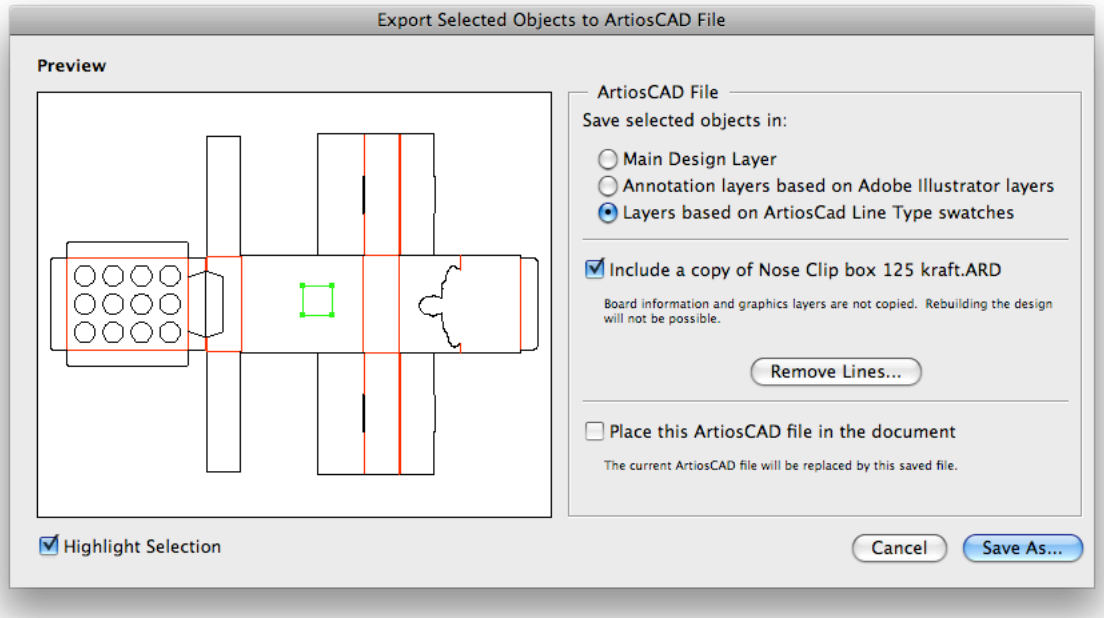
If you are exporting an Artios Canvas file (.acd) containing multiple printable parts, you can choose to export the ACD file as a single ACD file, or as multiple individual ARD files, one for each part.

Export Selected Objects to ArtiosCAD File

ArtiosCAD Export adds the item **Export Selected Objects to ArtiosCAD File** to the **Structural Design** menu. Only ARD files can be included when exporting to a new ArtiosCAD file.

Select the contours to export to the ARD file and choose **File** > **Structural Design** > **Export Selected Objects to ArtiosCAD File**.

The **Export Selected Objects to ArtiosCAD File** dialog opens.



Save selected objects in

You can choose to save the selected objects in the Main Design Layer or in Annotation Layers. If you save them in Annotation Layers, an ARD file will be created with annotation layers with the same name as the illustrator layers.

Next to this, you can choose **Layers based on ArtiosCAD Line Type swatches**. If the selected objects are stroked with a swatch color with an ArtiosCAD line type name (e.g. cut, crease, bleed), then this option will create layers depending on the stroke color name:

- Cut and crease lines will go to a Main Layer
- Outside Bleed lines will go to an Outside Bleed Layer
- Outside Coating lines will go to an Outside Coating Layer
- Dimensions and text will go to a Dimension Layer
- All other linetypes will go to an Annotation Layer

For convenience, a swatch library ArtiosCAD Line Types is included with the plug-in. You can display the swatch library by selecting **Window** > **Swatch Libraries** > **ArtiosCAD Line Types**. In this swatch library, all ArtiosCAD design line types have been predefined.

Include a copy of ****.ARD

You can choose to include a copy of the ARD file that was loaded in the Illustrator document that is closest to the selected objects. The resulting ARD file will contain the selected objects AND what is in the CAD layers in Illustrator.

Remove lines

It is possible to remove some lines of the original ArtiosCAD file. This is meant to modify cutout windows. Do not attempt to remove fold lines with this tool. If you do this, the original fold angles will be lost.

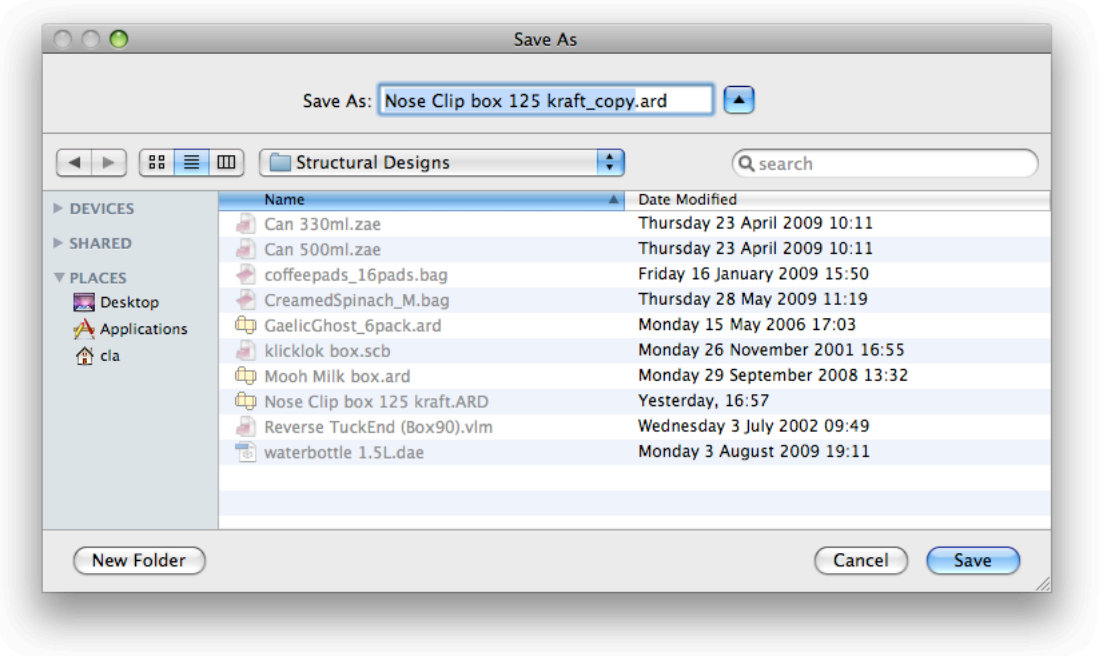
Place this ArtiosCAD file in the document

If you switch this option on, the resulting ARD file will be placed in the Illustrator document. It will replace the Structural Design file that was loaded originally.

Preview

In the preview window, you see a preview of what will be saved. You can highlight the selected contours by toggling on Highlight Selection. You then see the distinction between the contours that are newly added to the resulting ARD file and those contours that come from the original ARD file.

If you click **Save As**, the **Save As** dialog opens.



If you have an ArtiosCAD file loaded in your Illustrator document, the software suggests as file name the name of the loaded ArtiosCAD file followed by _copy.

We recommend you not to overwrite the original ARD file as some functionality of the ARD file will be lost: graphics layers are not copied and it will not be possible to rebuild the created ARD file and text will be contourized.

Note:

Placed EPS objects and/or pixel-based objects cannot be copied to an ARD file. The fill color of the selected contours is not maintained in ArtiosCAD. Rather, the stroke color of the contour determines the line type in ArtiosCAD. If the selected contour is in the Main Design layer, the pointage of the contour will be 2. In all other cases, the pointage will be 0.

ArtiosCAD - Copy to Clipboard

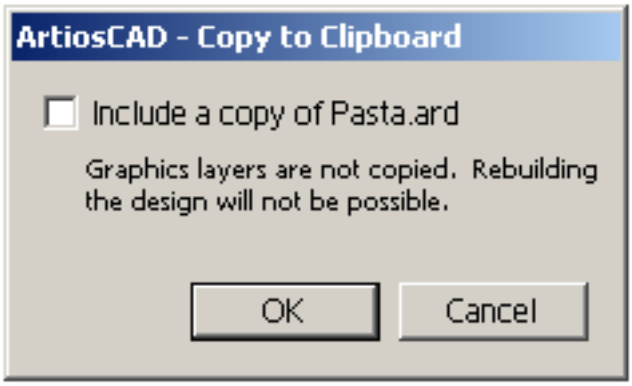
Note:

This function is only available on PC.

It can be found on the **Edit** menu:

ArtiosCAD - Copy to Clipboard copies the selected contours to the Windows Clipboard. They can directly be pasted into ArtiosCAD. If you have the same ArtiosCAD workspace open in ArtiosCAD and have not modified it since opening it in Illustrator, when you paste the contents of the clipboard into ArtiosCAD, they use the same placement as was used in Illustrator. This function is useful for ArtiosCAD users who need shapes from the graphics to be added to the box design.

Copy to Clipboard also offers you the possibility to add the ARD file that is currently loaded in the Illustrator document that is closest to the selected objects. Keep in mind that graphics layers are not copied. The resulting ARD file is also not rebuildable and text will be contourized.



Note:

Placed EPS objects and/or pixel-based objects cannot be copied to an ARD file. The fill color of the selected contours is not maintained in ArtiosCAD. The stroke color of the contour determines the line type in ArtiosCAD. If the selected contour is in the Main Design layer, the pointage of the contour will be 2. In all other cases, the pointage will be 0.

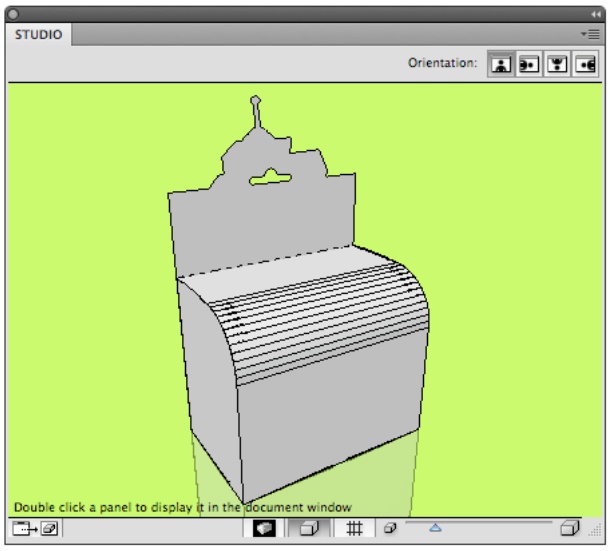
Relationship between stroke color in Illustrator and line type in ArtiosCAD

If the contours are stroked with a swatch color with an ArtiosCAD line type name (e.g. cut, crease), then the corresponding items in ArtiosCAD will have the corresponding line type. For example, if you give your contour a stroke color with as name 'Annotation', the contour will be in line type 'Annotation' in ArtiosCAD. If the name is not an ArtiosCAD line type name, the contour will be a cut line. For convenience, a swatch library ArtiosCAD Line Types is included with the plug-in. You can display the swatch library by selecting **Window** > **Swatch Libraries** > **ArtiosCAD Line Types**. In this swatch library, all ArtiosCAD design line types have been predefined.

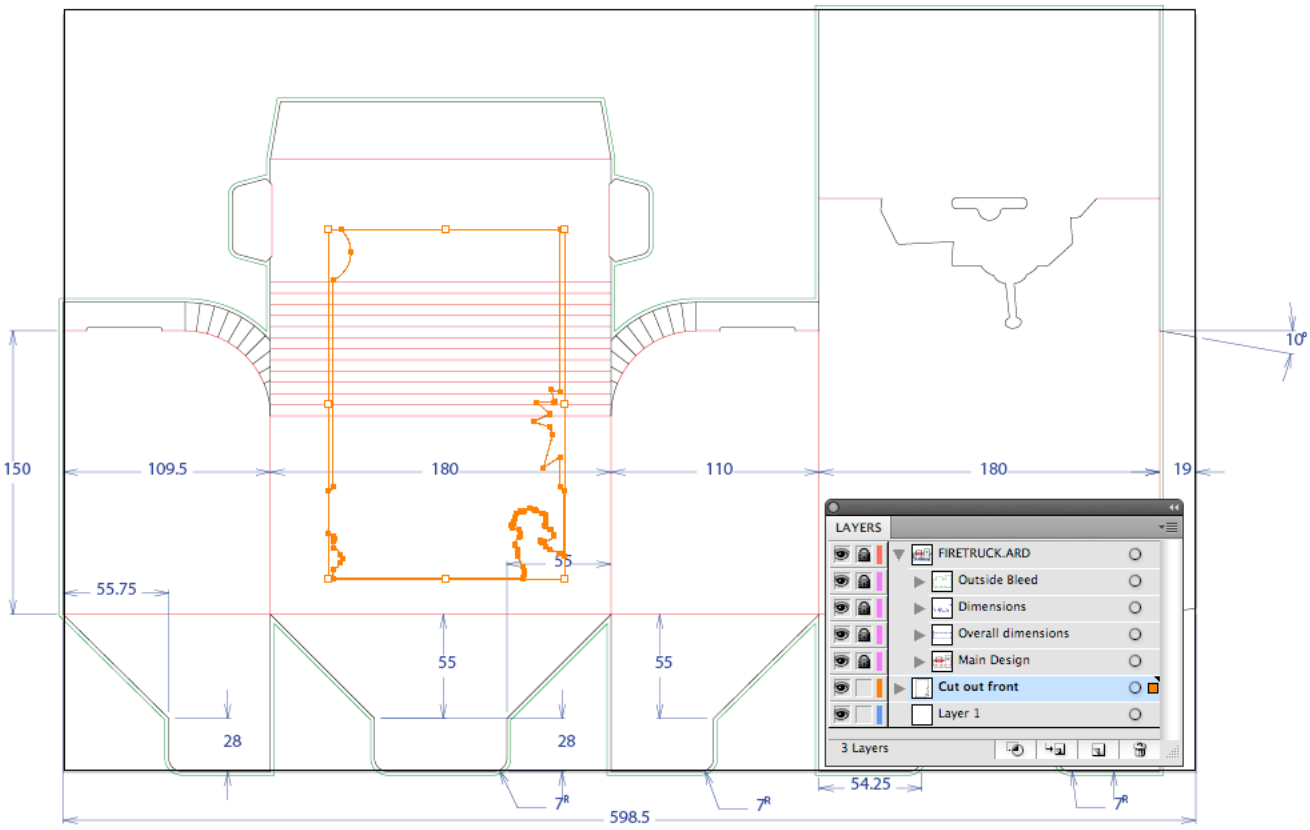
How to add a cutout window to an existing ArtiosCAD file?

1. Open or place an ARD file.

   If you also have Studio Designer, you will see a 3D view of your folded box in the Studio window.

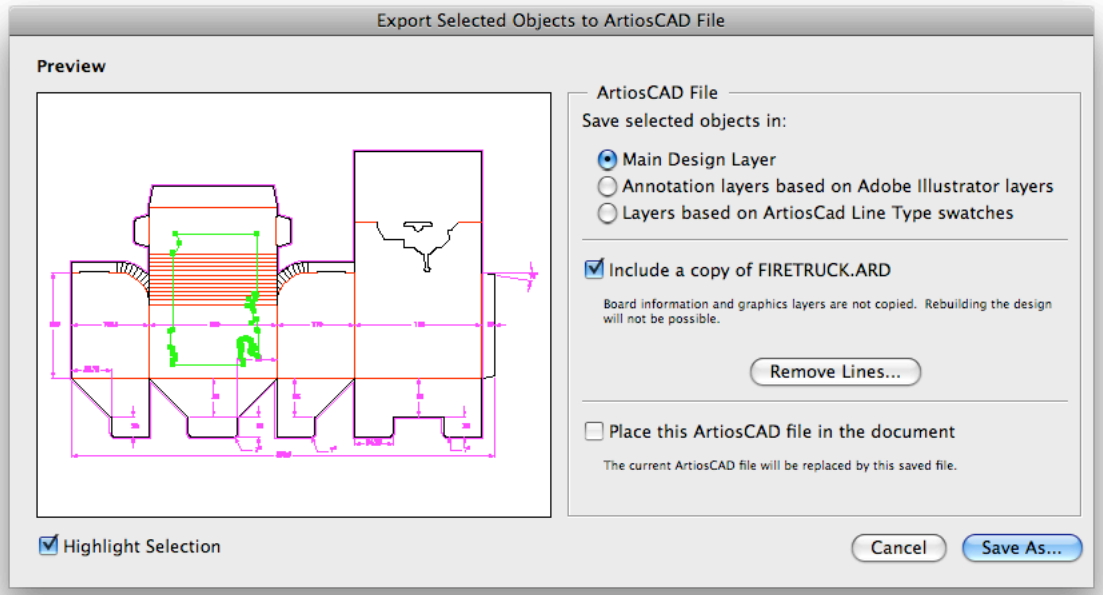


2. Create and select the cutout shape that you want to add to the ArtiosCAD file.



3. Choose **File** > **Structural Design** > **Export Selected Objects to ArtiosCAD File**.

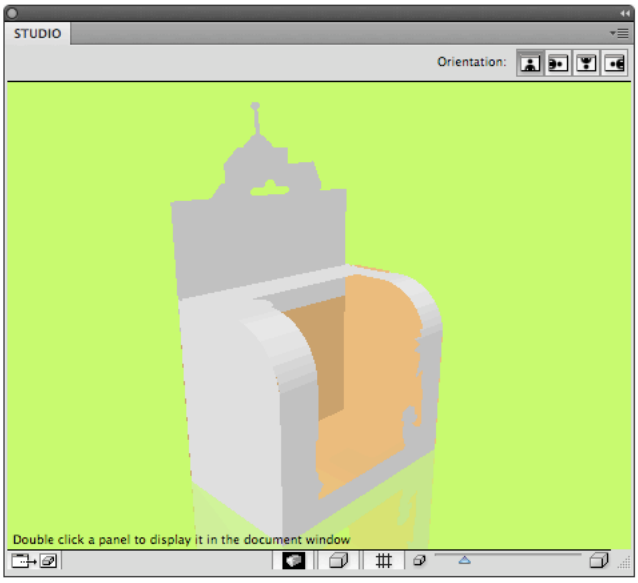
   The **Export Selected Objects to ArtiosCAD** File appears.



4. Do one or more of the following:
   - Save the selected objects in the Main Design Layer.
   - Include a copy of the original ARD file.
   - Place this ArtiosCAD file in the document.

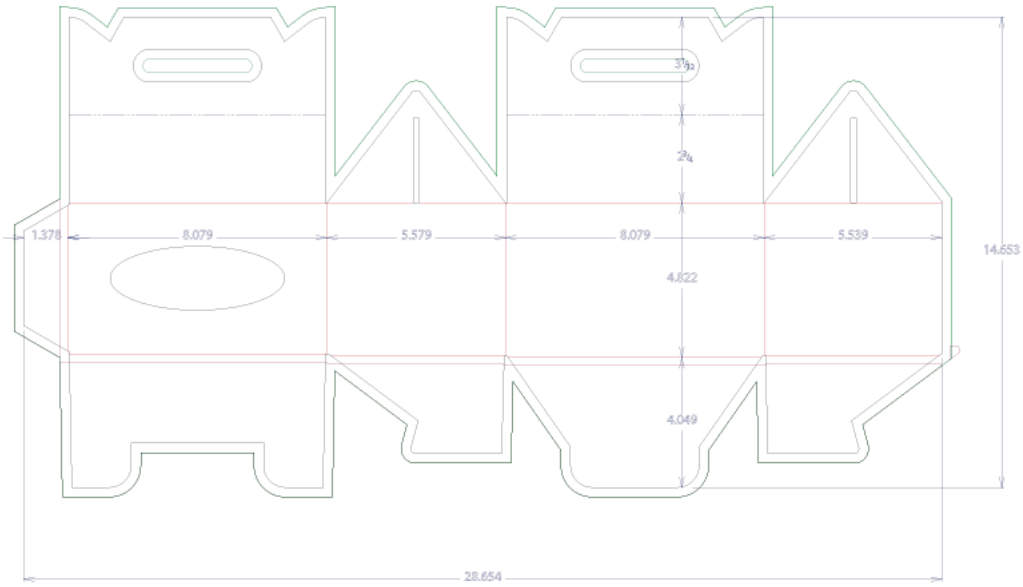
   For more information on the different options, please refer to *Export Selected Objects to ArtiosCAD File* on page 63.
5. Click **Save As...**.

   The selected objects are saved in the **Main Design Layer**. They get the cut line type (which is the default if you did not specify a swatch with as name an ArtiosCAD line type). Apart from the selected objects, the original ARD file is copied in the resulting ARD file and the resulting ARD file is immediately placed in the Illustrator document. If you have **Studio Designer**, you will automatically see the ARD file with the cutout folded in 3D:

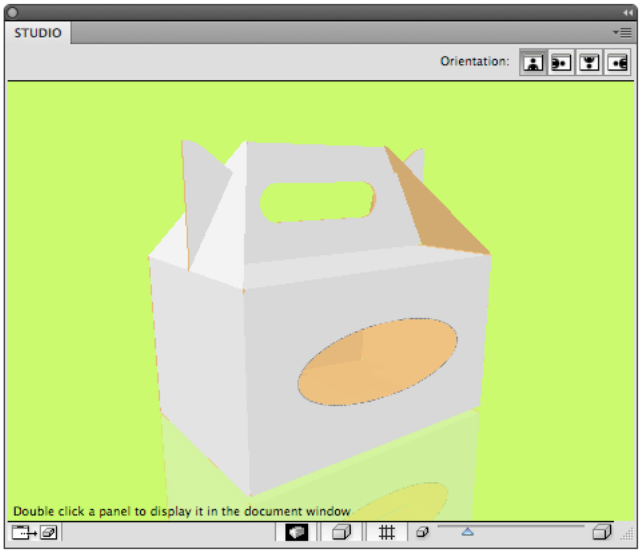


How to modify a cutout window in an ArtiosCAD file?

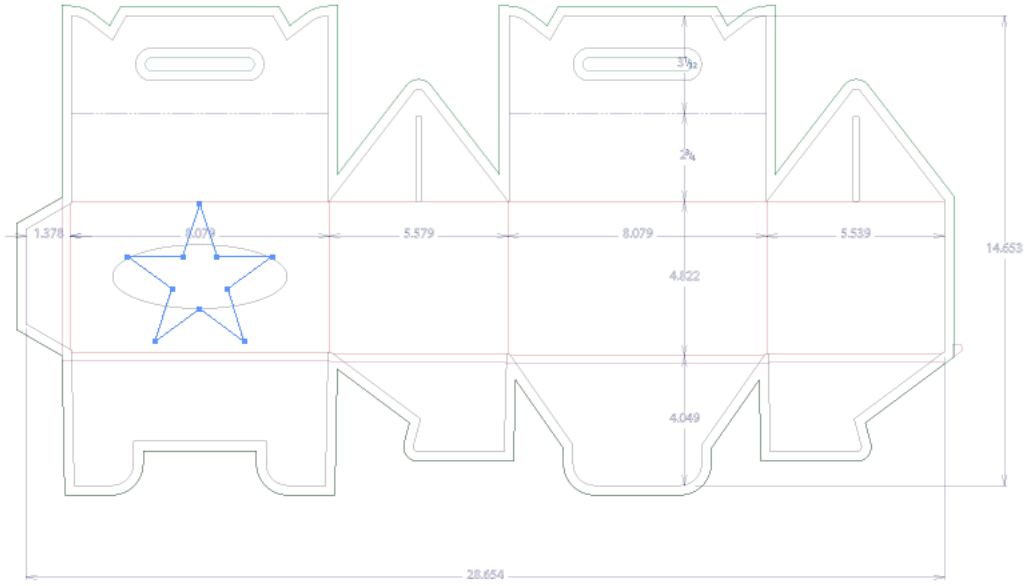
1. Open or Place an ARD file that already contains a cut-out window.



If you also have **Studio Designer**, you will see a 3D view of your folded box in the Studio window.

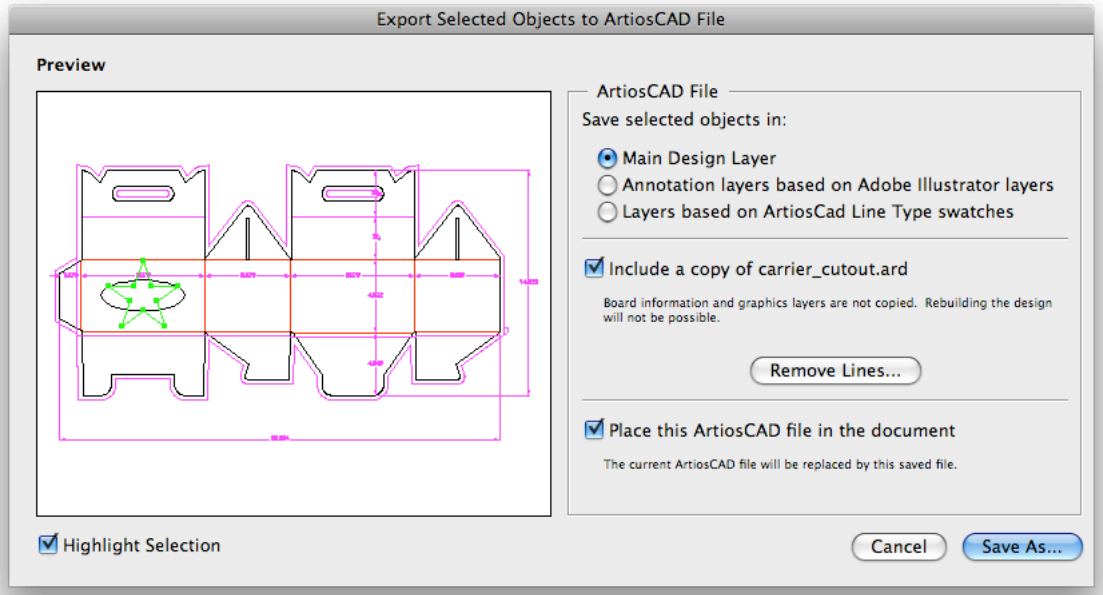


2. Create and select the new cutout shape that you want to add to the ARD file.



3. Choose **File** > **Structural Design** > **Export Selected Objects to ArtiosCAD File**.

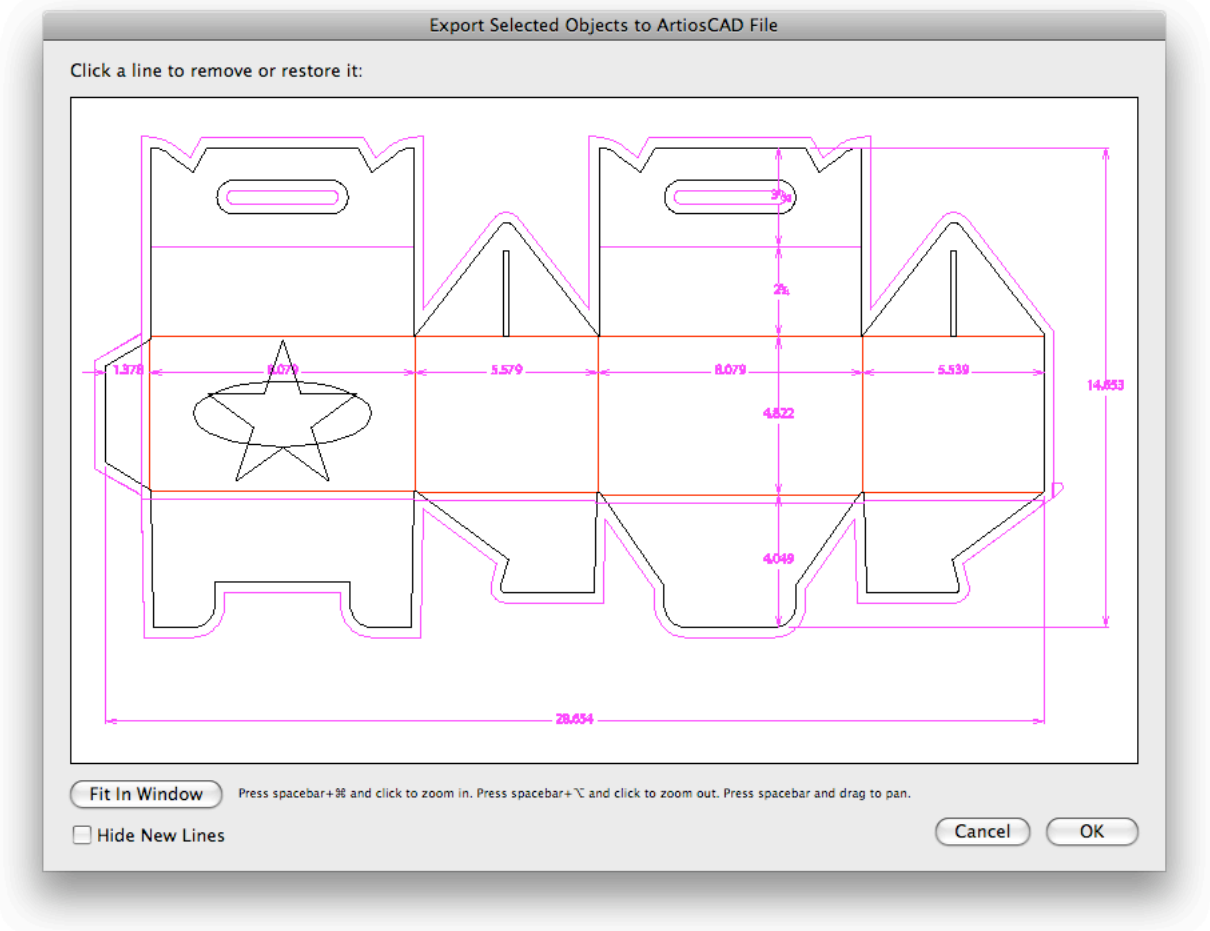
   The **Export Selected Objects to ArtiosCAD** File appears.



In the preview window you notice that you do not get the desired result. We need to remove the original cutout window.

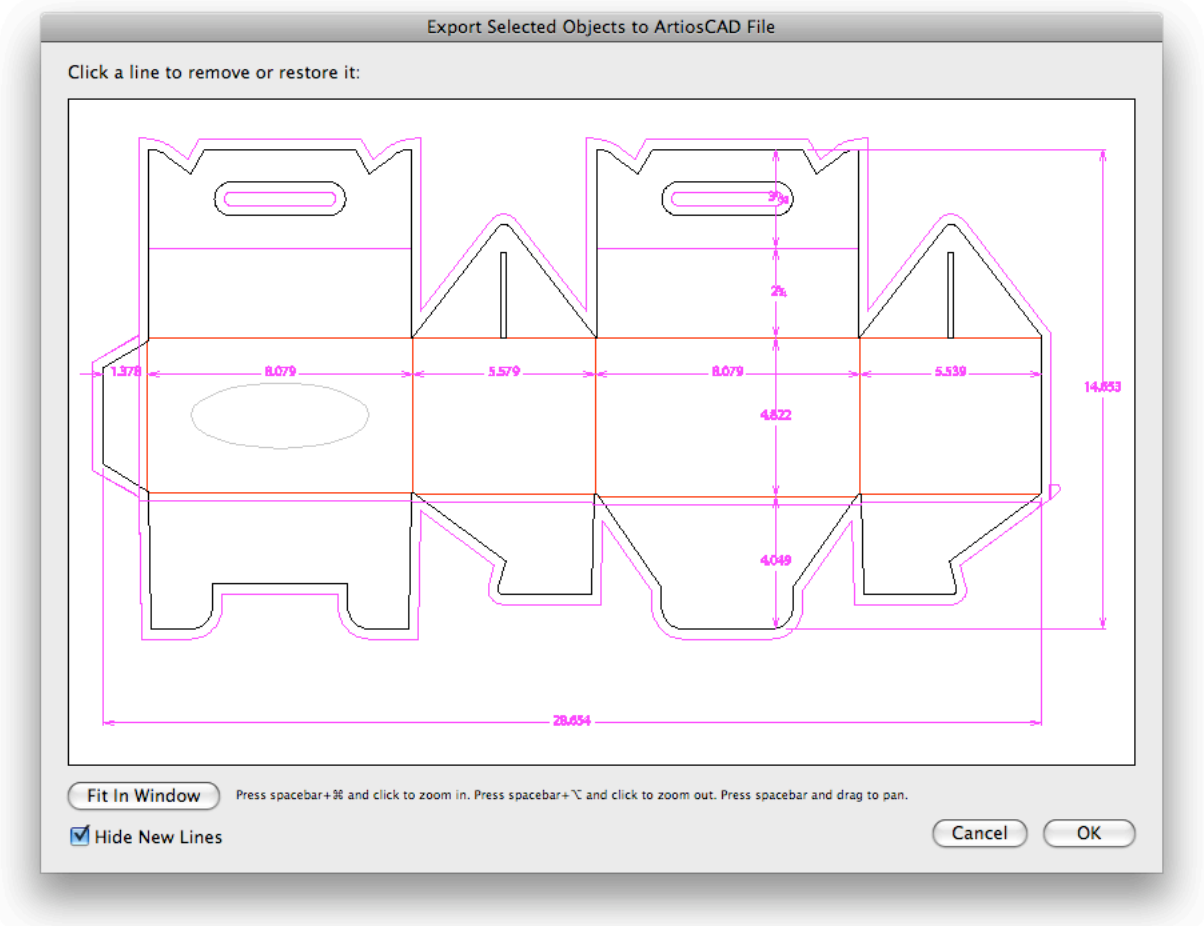
4. Click **Remove Lines**.

   The **Remove Lines** dialog appears.



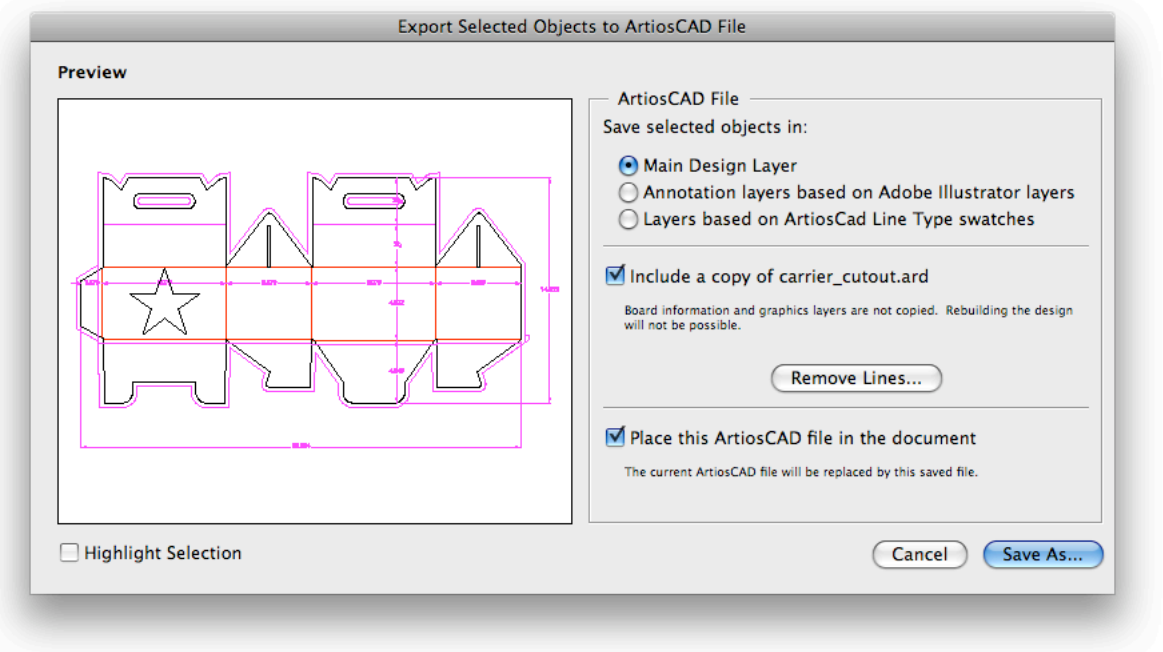
5. In this dialog, you can select the lines you would like to remove. It will not be possible to select the new lines. You can choose to hide the new lines by enabling **Hide New Lines**.
6. Click and drag a rectangle around the original cutout window.

   This window will be grayed out. This means that it will be removed in the final ARD file.



7. Click **OK**.

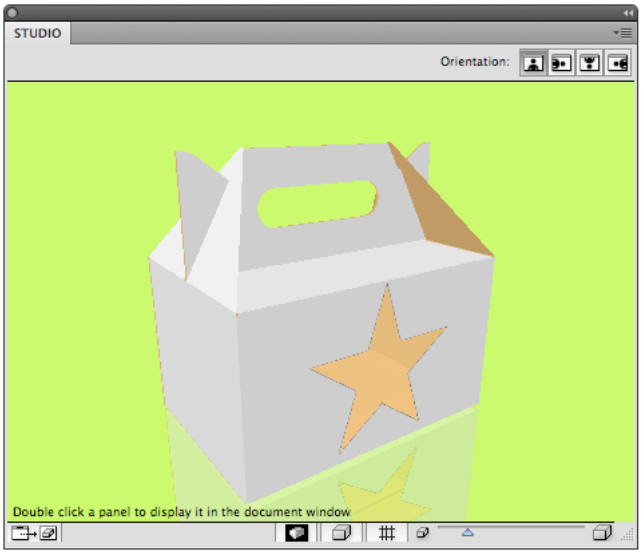
   This bring you back to the **Export Selected Objects to ArtiosCAD File** dialog. In the preview window you notice that the original cutout has been removed.



8. Click **Save As**.
9. Specify a file name in the **Save As** dialog.

   The software suggests the name of the loaded ArtiosCAD file followed by _copy.
10. Click **Save**.

    If you have **Studio Designer**, you will automatically see the ARD file with the new cutout folded in 3D.



3.5. The Page Box Plug-in

3.5.1. Introduction

Page Boxes are used to define the outside borders and margins of your document, and it is used in the Esko Software Suite workflow environment.

Page Box definitions are saved as part of the Illustrator file used by the plug-ins Shuttle and PowerLayout Client.

Page Boxes are not taken into account when printing directly from Adobe Illustrator, nor are they exported when exporting to a non-native format via standard Adobe plug-ins. They do not appear as objects in the Layers palette.

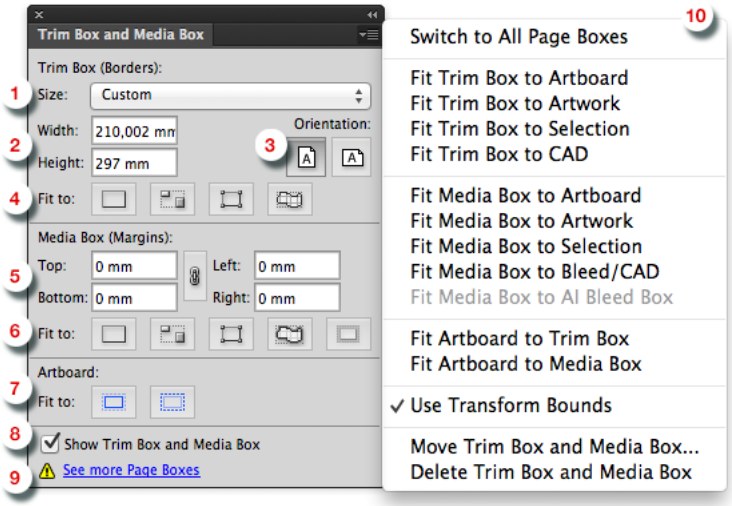
You can find the Page Box plug-in in **Window** > **Esko** > **Trim Box and Media Box**

The Page Box plugin can work in two modes:

- **Trim Box and Media Box** (defining only those two page boxes). See *Trim Box and Media Box* on page 76
- **All Page Boxes**. See *All Page Boxes* on page 79

You can switch mode by selecting **Switch to [mode]** from the flyout menu.

3.5.2. Trim Box and Media Box



1. **Trim Box Size**: Select the size from the dropdown list.
2. **Trim Box Width/Length**: Enter the Width/Length if you want a custom size.

Tip:

The units are defined in the Illustrator preferences.

3. **Trim Box Orientation**: Select the orientation: portrait/landscape.

Note:

When the Trim Box is being dragged or Width or Height editboxes edited, the radio buttons Portrait/Landscape flip automatically so that Landscape is active whenever Width > Height and Portrait whenever Width < Height.

4. **Fit Trim Box to**
   - Fit Trim Box to Artboard
   - Fit Trim Box to Artwork
   - Fit Trim Box to Selection
   - Fit Trim Box to CAD
5. **Media Box (Margins)** enter the top, bottom, left and right values.

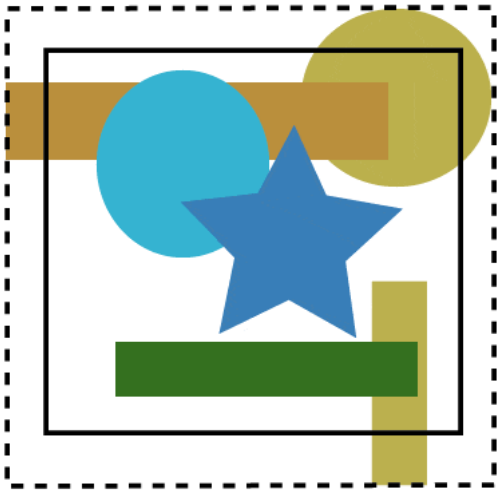
Tip:

The units are defined in the Illustrator preferences.

6. **Fit Media Box to**
   - Fit Media Box to Artboard
   - Fit Media Box to Artwork
   - Fit Media Box to Selection
   - Fit Media Box to Bleed / CAD (when no bleed was defined the cad will be taken as reference)
7. **Fit Artboard to**
   - Fit Artboard to Trim Box
   - Fit Artboard to Media Box
8. **Show Trim Box and Media Box**: To display or hide the trim Box and Media Box, use this toggle.
9. **See more page boxes**: In case page boxes other than Trim and Media box are defined, this link will open the **All Page Boxes** version of the palette. See *All Page Boxes* on page 79
10. **Trim Box and Media Box dropdown menu**
    - Switch to All Page Boxes. see *All Page Boxes* on page 79
    - Fit Trim Box to Artboard
    - Fit Trim Box to Artwork

- Fit Trim Box to Selection
- Fit Trim Box to CAD
- Fit Trim Box to Crop Area
- Fit Media Box to ArtBoard
- Fit Media Box to Artwork
- Fit Media Box to Selection
- Fit Media Box to Bleed / CAD (when no bleed was defined the CAD will be taken as reference)
- Fit Media Box to AI Bleed Box
- Fit Artboard to Trim Box
- Fit Artboard to Media Box
- Use Transform bounds: if this option is enabled, TrimBox/MediaBox will respect as they are defined in Adobe Illustrator. If disabled, TrimBox/MediaBox will respect visible bounds.
- Move Trim Box and Media Box ... open the 'Move Trim Box and Media Box' interface
- Delete Trim Box and Media Box

The figure below illustrates the Trim Box (borders) and Media Box (margins) of an output document as interpreted on an Esko system. The full black line represents the borders (corresponding to one of the above options) while the dotted black line indicates the margins of the document:



Moving and Scaling Trim Box and Media Box

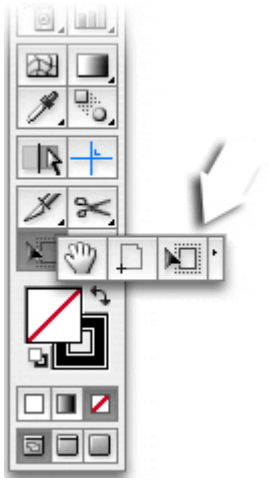
To move or change the size of the Trim and Media Boxes, you can either

- Select the Trim and Media Box Tool from the AI tool palette.

  Use the Trim and Media Box to click and drag the Trim and Media Box.

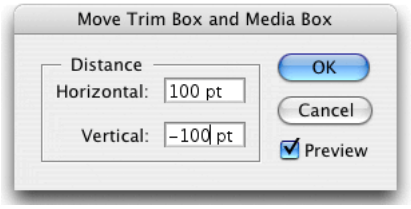
- Select the Trim and Media Box Tool from the AI tool palette.
  - ALT +drag = scale from the center out
  - SHIFT + drag = constrained scaling

- ALT + SHIFT + drag = constrained scaling from the center out



OR

- Select a preset from the drop down menu. *OR*
- Use the numeric input field. The numeric input field appears when you select **Move Trim Box and Media Box** in the dropdown menu.



Tip:

Double-clicking Trim and Media Box tool in toolpalette opens the 'Move Trim Box and Media Box' dialog.

OR

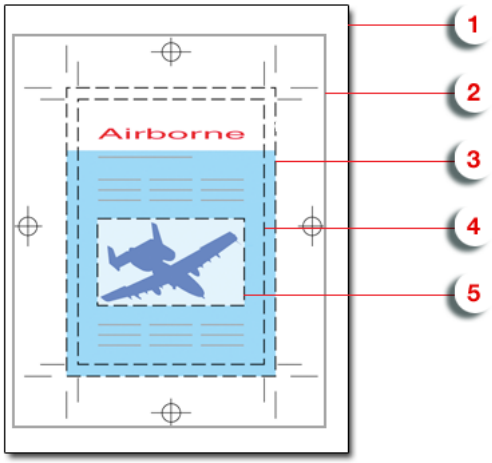
- You could use one of the "fit to" options (to Artboard, artwork, selection, cad or crop area).

Tip:

The units are defined in the Illustrator preferences.

3.5.3. All Page Boxes

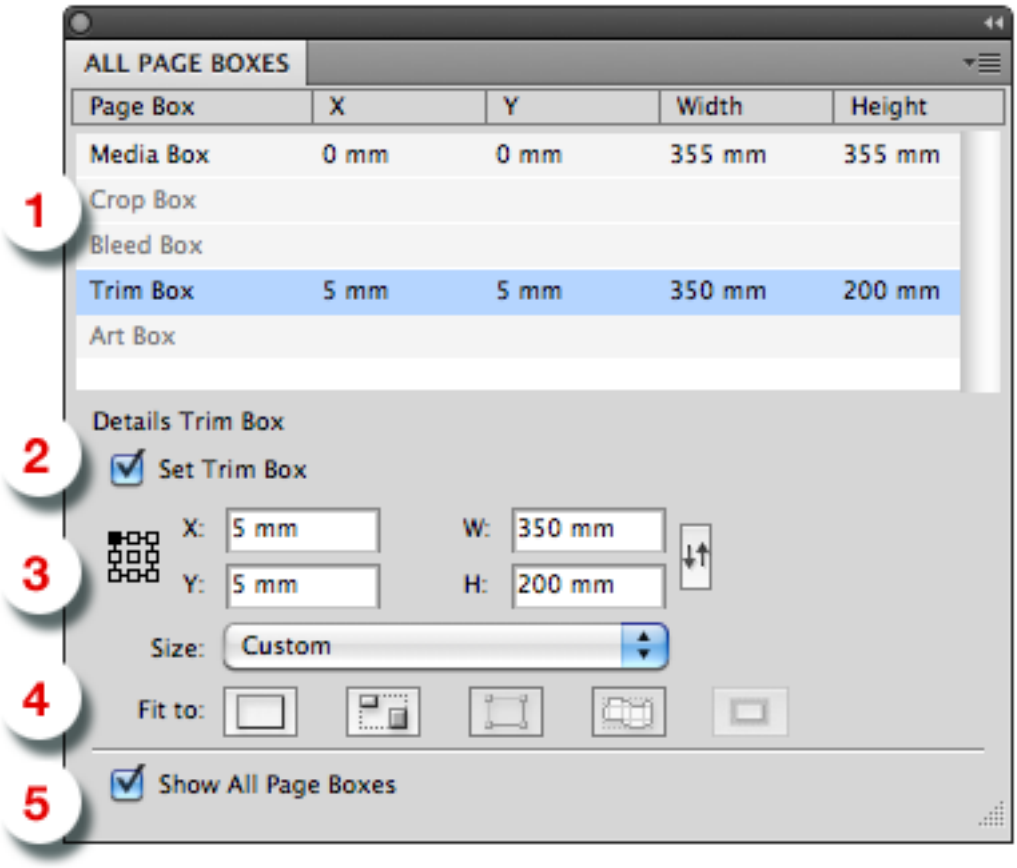
Using the **All Page Boxes** mode, you can set all 5 page boxes: Media Box, Crop Box, Bleed Box, Trim Box and Art Box



1. Media box: this is the page format
2. Crop box: includes the Bleed box and all marks.
3. Bleed box: defines the trimmed page plus the bleed.
4. Trim box: this is the net document format.
5. Art box: the Art box can be used to specify any section of the page.

You can see the dimensions of all Page Boxes in the Page Box list. You can

1. Select a Page Box in the list. Its details will be shown in the bottom part of the dialog.
2. Enable (or disable) the specific page box by enabling the **Set [...] Box** option.
3. Enter the offset, width and heigth. You can click the button to swap width and height. In the **Size** dropdown, you can select any of the preset sizes.
4. Click one of the **Fit to** buttons to fit the selected page box respectively to the ArtBoard, Artwork, Selection or CAD.
5. Use the **Show All Page Boxes** to show or hide all Page Boxes in your job.



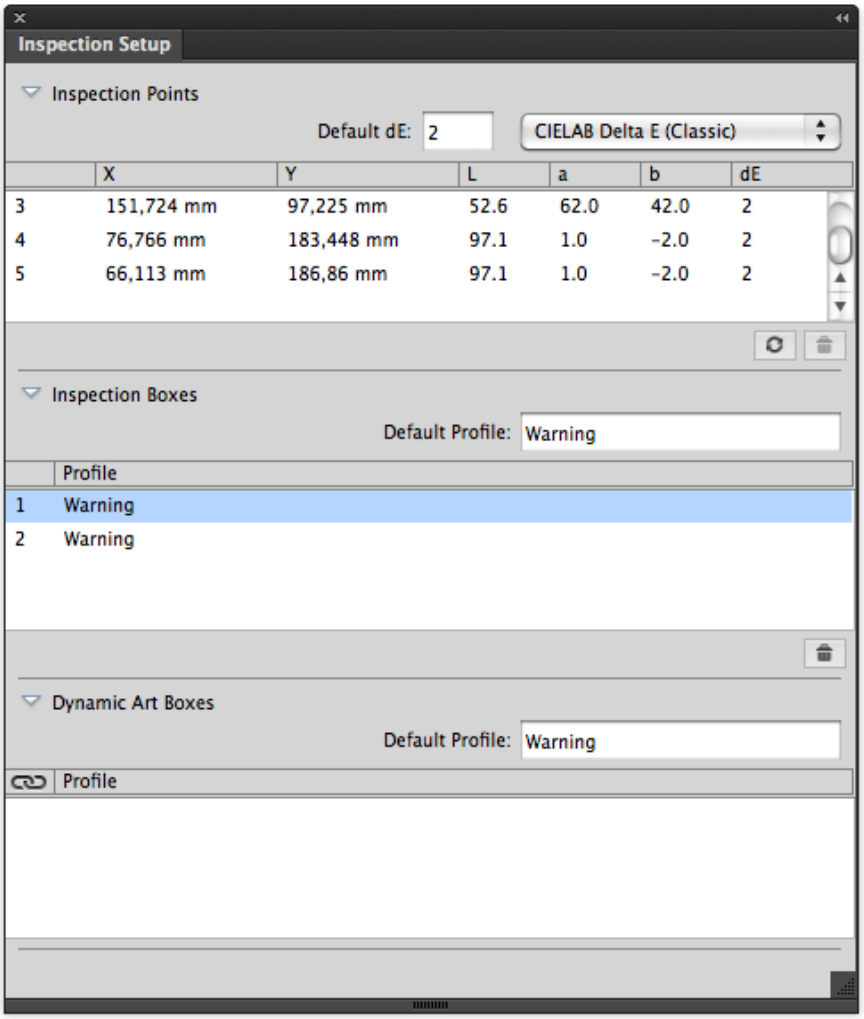
3.6. The Inspection Setup Plug-In

The Inspection Setup Plug-In allows you to define Inspection points or Inspection boxes in your job.

For each of these Inspection points, you will see the Lab value and DeltaE. For every Inspection box, you can set the Profile. Inspection points and boxes will be exported, e.g. to be used in an Inspection System in inline presses. This Inspection System will warn if the values measured at a specific position are more different from the entered Lab values than the allowed deltaE, or if the Inspection box or Dynamic Art box doesn't match the defined profile.

The plug-in consists of

- the **Inspection Setup tool** , under the Eyedropper tool in the toolbar
- the **Inspection Setup palette**, which can be opened by selecting the Inspection Setup tool, or by adding an Inspection point.



3.6.1. Adding and changing Inspection points

The **Inspection Setup palette** shows all the Inspection points, indicating the coordinates (distance from the top left corner of the trim box), Lab value and default deltaE value.

- Select the **Inspection Setup tool** from the Illustrator toolbar and click in the job to insert a new Inspection point.

  The Inspection point will be visible in the job, with its number next to it.
- Select an Inspection point in the palette to highlight the corresponding Inspection point on the Illustrator job. You can select multiple Inspection points
- Select one or more Inspection points and click the **delete** button to delete the Inspection points
- You can manually change the Lab and deltaE value for every Inspection Point.
- Click the **Refresh** button to update the Inspection Point list.

- You can move an Inspection point in two ways:
  - Click within the Inspection point, and drag it to the new location
  - In the Inspection Point list, change the coordinates for the Inspection point.

3.6.2. Adding and changing Inspection boxes

The **Inspection Setup palette** shows all the Inspection boxes.

- Select the **Inspection Setup tool** from the Illustrator toolbar and click and drag in the job to insert a new Inspection box.

  The Inspection box will be visible in the job, with its number next to it. When creating a new Inspection box, the **Default Profile** is used
- Select an Inspection box in the palette to highlight the corresponding Inspection box on the Illustrator job. You can select multiple Inspection boxes.
- Select one or more Inspection boxes and click the **delete** button to delete the Inspection boxes
- You can manually change the **Profile**.
- You can move or change an Inspection box in different ways:
  - Click on the center point of the Inspection box, and drag it to move the Inspection box to a new location
  - Click one of the 8 handles on the Inspection box, and drag to modify the Inspection box

3.6.3. Dynamic Art Placeholders

The Dynamic Art section of the **Inspection Setup palette** shows all Dynamic Art placeholders defined in the job.

- Enable the checkbox in front of a Dynamic Art placeholder to use it as an Inspection box.

  When adding a Dynamic Art placeholder, the **Default Profile** is used
- Select a Dynamic Art placeholder in the list to highlight the corresponding Dynamic Art placeholder on the Illustrator job. You can select multiple Dynamic Art placeholders
- You can manually change the **Profile**.
- Disable the checkbox in front of a Dynamic Art placeholder to stop using it as an Inspection box.

3.6.4. Import and Export

When exporting normalized PDF, Inspection points and boxes added to a job are saved in the PDF file, and these Inspection points and boxes will be recognized by Packadge and AE.

Also, when opening a normalized PDF from another Esko product (such as PackEdge), the Inspection points and boxes information stored in the PDF document will be shown in the Inspection Setup palette.

Note: Dynamic Art placeholders are not saved as such in normalized PDF. The selected Dynamic Art placeholders will be exported as "Inspection Box". If you import the normalized PDF in Adobe Illustrator again, or open the normalized PDF file in e.g. Packedge, these Dynamic Art placeholders will be shown as Inspection Boxes

3.7. Messages

The **Messages** plug-in is included with all Esko DeskPack plug-ins.

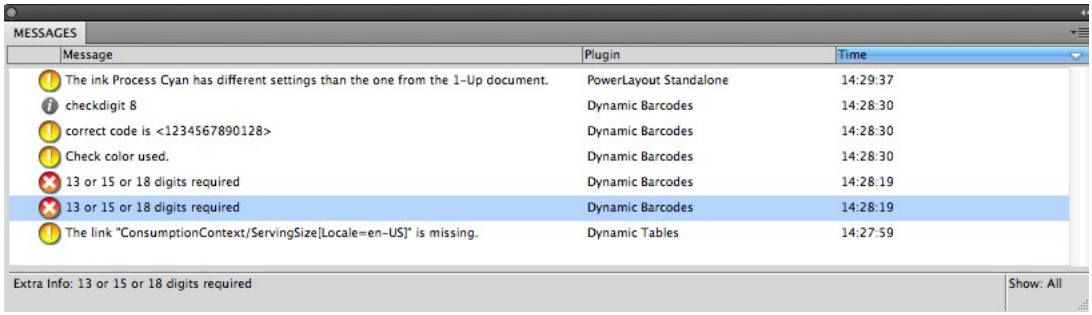
It displays the information, warnings and errors from all the other DeskPack plug-ins, and tells you which plug-in generated them.

You can filter the messages you see when the Messages palette is open, and clear or save all messages if you need to.

3.7.1. The Messages Palette

The **Messages** palette pops up automatically when another DeskPack plug-in generates a warning or an error.

You can also open it from **Window** > **Esko** > **Messages**.



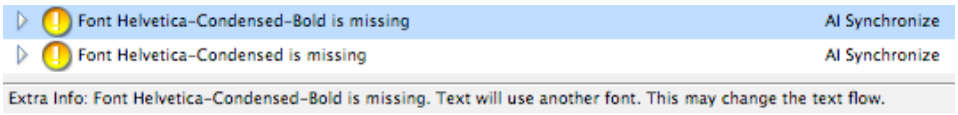
This palette shows you:

- the message's severity (information, warning or error),
- the message's text in the **Message** column,
- which **Plugin** generated the message,
- the **Time** the message was generated at.

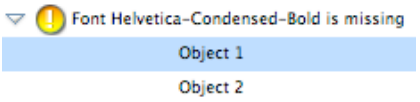
Tip: You can click the column headers to sort the messages, and drag the columns horizontally to adjust their widths.

You can also use the palette to get extra information and / or select the objects that generated warnings or errors:

- click a message to display extra information at the bottom of the palette.



- click the triangle in front of a message to see the list of objects it relates to.

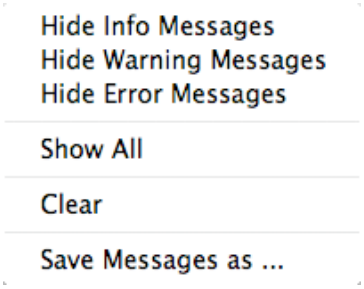


- click one of the objects in the list to select it in the file.
- double-click that object to select it and zoom in on it in the file.
- double-click the message to select and zoom in on all objects it relates to in the file.

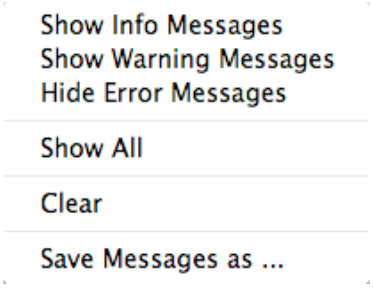
3.7.2. Filtering the Messages

You can show or hide certain types of messages using the palette's fly-out menu.

- To hide:
  - all informational messages, select **Hide Info Messages** in the fly-out menu,
  - all warnings, select **Hide Warning Messages**,
  - all errors, select **Hide Error Messages**.

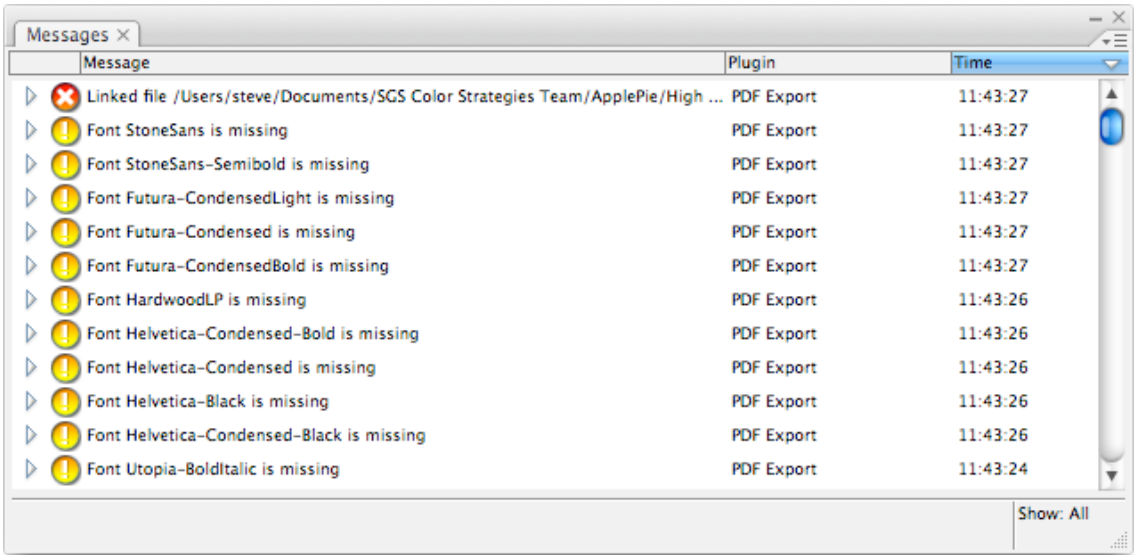


- To show them again, select either:
  - **Show Info Messages**,
  - **Show Warning Messages**,
  - **Show Error Messages**.

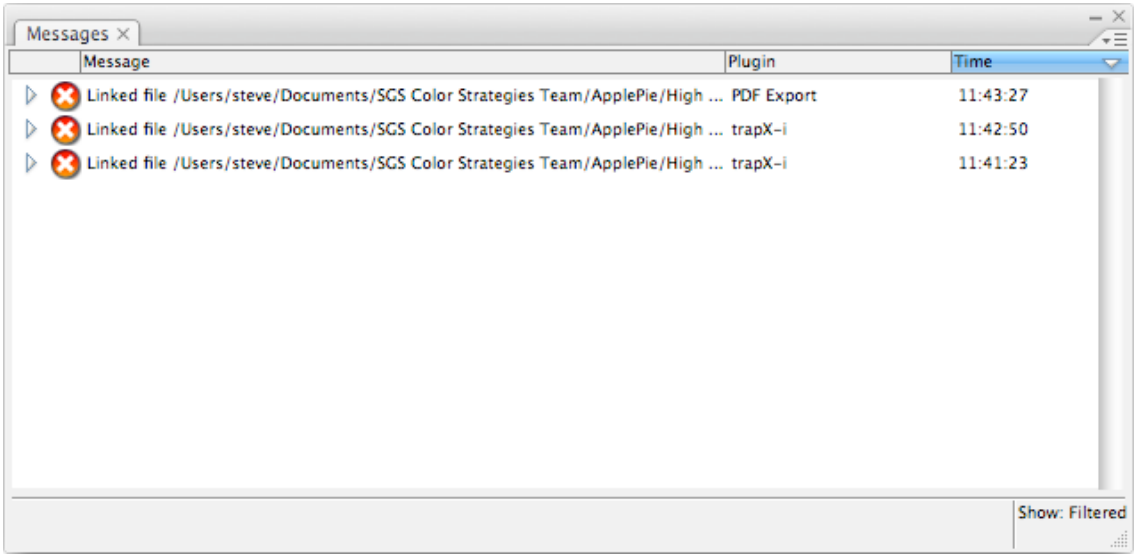


- To only show the last message, select **Show Last** in the fly-out menu.
- To show all messages again, select **Show All**.

When showing all messages, you can see **Show: All** at the bottom right of the palette.



When filtering messages (for example filtering out the warning messages, or showing only the last message), you can see **Show: Filtered** at the bottom right of the palette.



3.7.3. Saving the Messages

To save all messages in a text file:

1. Select **Save Messages as...** in the fly-out menu.

2. In the browser window that opens, choose the name and location to use for saving your file.

3.7.4. Clearing the Messages

- To remove all messages from the **Messages** palette, select **Clear** in the fly-out menu.

3.8. Esko Document Setup

By choosing **File** > **Esko Document Setup** you can open the **Esko Document Setup** dialog.

The settings made here are saved in the Esko XMP Document Information.

3.8.1. Distortion

The vertical and horizontal distortion value is saved with the document and used by Esko RIPs when generating the final output. It allows to compensate for distortions in certain printing methods, e.g. flexography. On mounting a flexo plate on the press, it is stretched out in one direction. By making the output slightly smaller than needed (e.g. 95%), we compensate for this distortion.

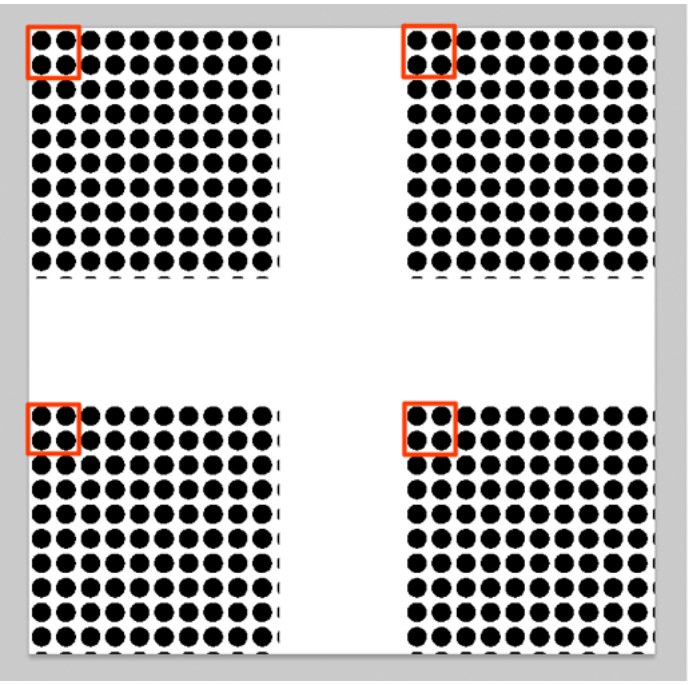
Values for vertical and horizontal distortion is limited to 90% - 110%.

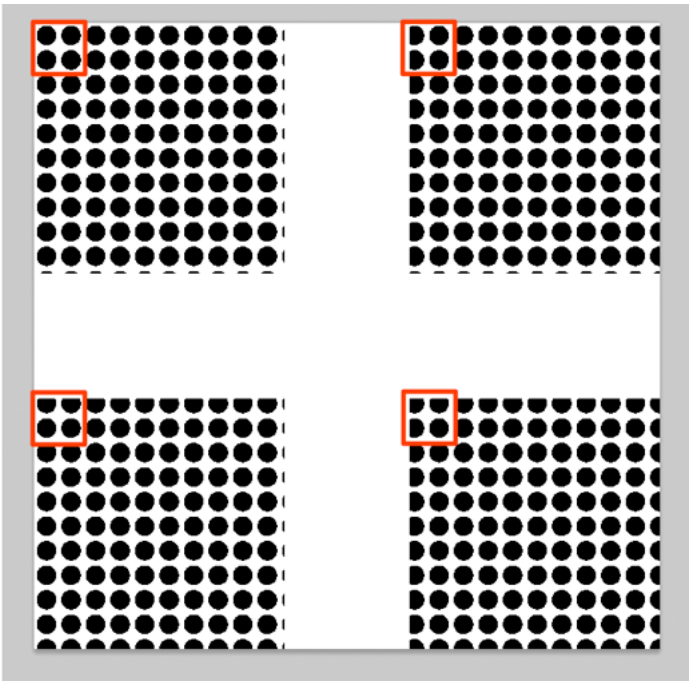
3.8.2. Screen Registration

The **Screen Registration** parameter allows to choose

- if the RIP should reset the screening origin for every one-up
- or keep the same screening origin for the complete document

Below a schematic representation of a Repetition with (left) and without (right) resetting the screen origin for every one-up.





3.9. Annotations

With the **Annotations** plugin, you can view .xfdf annotations generated by Global Vision and WebCenter.

Since version 16, Global Vision SDK has been integrated in Esko's Automation Engine, allowing several types of Global Vision Check tasks to be run.

The output of a Global Vision Check is an .xfdf file, highlighting the found errors and problems on the document.

The .xfdf file can be loaded (see *Loading XFDF files* on page 88) and the annotations are shown in the Annotations palette (see *The Annotations palette* on page 89).

3.9.1. Loading XFDF files

Whenever a file is opened in Adobe Illustrator, the Annotations plugin will try to find the corresponding XFDF file to open.

- For GlobalVision annotations, the supported file types are Adobe PDF, Normalized PDF and Adobe Illustrator file
- For WebCenter annotations, the supported file types are Adobe PDF, Normalized PDF, Adobe Illustrator file, Adobe Illustrator ZIP file and ARD.

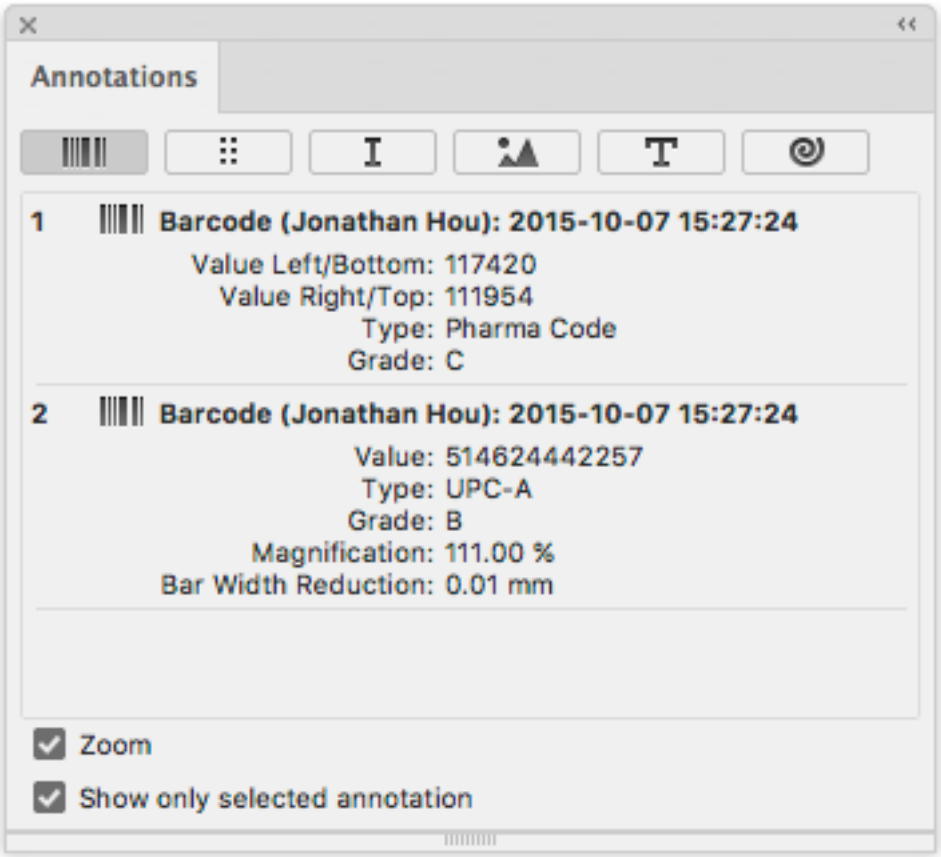
If for example a file "sample.pdf" is opened, the plugin will search for the corresponding .xfdf file in the following locations, in the specific order shown below.

1. `.view/sample.pdf/*.xfdf`

2. `.view/sample*.xfdf`
3. `sample*.xfdf`
4. `./sample_wcr.xfdf` for WebCenter annotations

3.9.2. The Annotations palette

The Annotation palette will show all Annotations found in the .xfdf file. You can open the palette by choosing **Window** > **Esko** > **Annotations.**



There are different types of annotations: Barcode, Braille, Spell Check, Artwork, Text Compare and WebCenter annotations.. You can browse to them by clicking the buttons on top of the palette.

Note: If the document only contains WebCenter annotations, you will not have any filtering options. If your document only contains Global Vision annotations, the "WebCenter" button will be hidden.

For every issue found, an entry in the list is shown. Some of these annotations have text content, while others can have an image preview, showing the difference between the actual artwork and how it should look.

If **Show only selected annotations** is enabled, only the annotations you select in the list will be highlighted in your job using a colored rectangle. Otherwise, all annotations in the job will be highlighted.

If **Zoom** is enabled, selecting an annotation in the list will automatically zoom in on the issue.

3.9.3. Multipage PDF files with Annotations

An XFDF file can contain annotations for a multipage PDF. Every annotation will have a reference to what page it belongs to.

If you import a multipage Normalized PDF, the plugin knows what page you imported, and only the Annotations for that specific page will be shown.

If you import a multipage PDF as Adobe PDF, the plugin can't know what page you imported. In that case, the Annotation palette will have a dropdown at the bottom of the palette, to decide for what page you want to load the annotations.

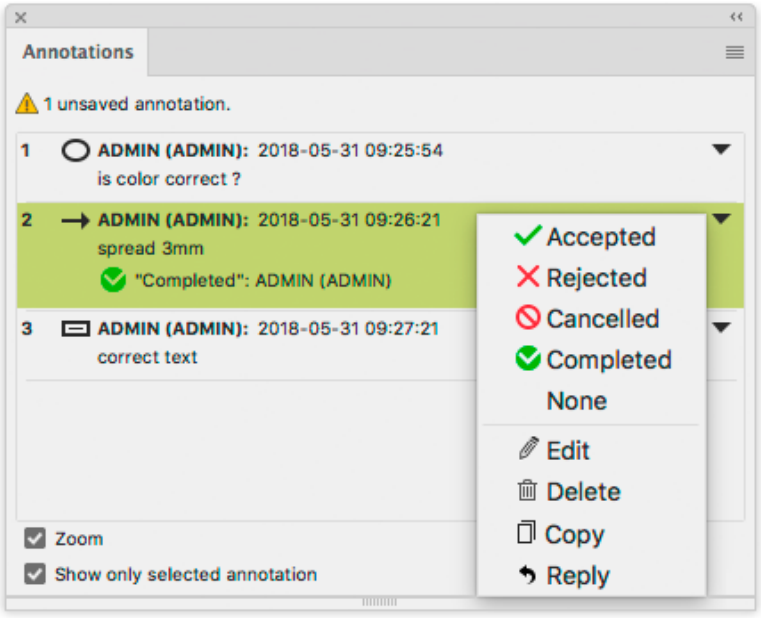
Note: Multi-page annotations is not supported for WebCenter annotations

3.9.4. Editing WebCenter annotations

You can edit existing WebCenter annotations or create new annotations, and save them back to WebCenter.

To create new annotations, you can use the Annotation Tool. See *Creating new annotations using the Annotation Tool* on page 91

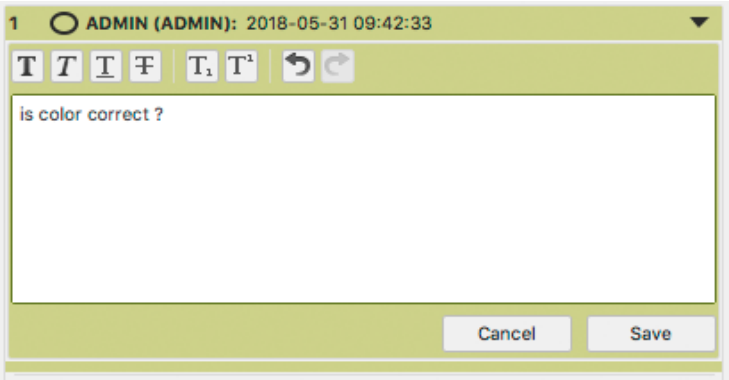
For every annotation (or reply), you can use the dropdown menu to modify the annotation.



- Select **Accepted**. **Rejected**, **Cancelled**, **Completed**, or **None** to change the status of the annotation accordingly.
- Select **Edit** to change the text of an annotation, or to move or resize the annotation.

  You can click and drag the annotation to move it, or you can click and drag any of the handles on the annotation to resize it.

  The dialog will be extended, offering text editing options.



Note: Clicking the **Save** button will store your changes in the (local) annotation, but will NOT save the annotation back to WebCenter. The annotation will be an "unsaved annotation" until you use **Save Annotations** from the fly-out menu. See below.

- Select **Delete** to remove the annotation.
- Select **Copy** to copy the content of a comment or annotation. This will open the Copy to Clipboard dialog. Select the text you want to copy, and click Copy.
- Select **Reply** to add a reply to an annotation.

  Note: You can only reply to an annotation, not to a reply.

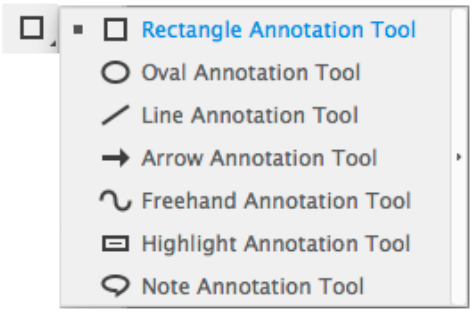
- If there are unsaved changes in the annotations, the Annotations palette will show a warning.

  Choose **Save Annotations** from the flyout menu in the Annotations palette to save the new or modified annotations back to WebCenter. See *Updating and Saving Annotations* on page 92

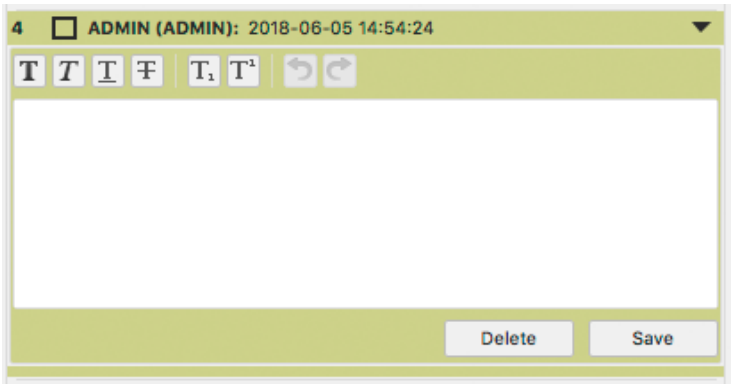
3.9.5. Creating new annotations using the Annotation Tool

Using the **Annotation Tool** you can create new annotations.

1. Click the **Annotation Tool** in Adobe Illustrator's tool box.



2. Select the type of annotation you want to create.
3. Click or drag where you want to create the annotation.
4. In the **Annotations** palette, enter the text for the annotation



5. Click the **Save** button to store your annotation text, or click **Delete** to remove the annotation.
6. If necessary, repeat the previous steps to create additional annotations.
7. Choose **Save Annotations** from the flyout menu in the Annotations palette to save the new annotations back to WebCenter. See *Updating and Saving Annotations* on page 92

3.9.6. Updating and Saving Annotations

Each annotation contains a time stamp of creation. In case the source file is modified and saved later than the annotation, a warning icon will be shown on top of the palette, indicating the annotations might be out of sync with the document.

Also when you edit Annotations (see *Editing WebCenter annotations* on page 90) or create new annotations (see *Creating new annotations using the Annotation Tool* on page 91), a warning icon is shown, indicating that these annotations are unsaved.

You can use **Save Annotations** from the fly-out menu to save all unsaved annotations to WebCenter.

You can use **Update Annotations** from the flyout menu in the Annotations palette to get the latest annotations from WebCenter.

If you select **Update Annotations** while your document contains unsaved annotations, a warning will be shown, asking if you wish to save the annotations. You can select **Yes** to save the annotations to WebCenter, or click **No** to ignore the unsaved changes and get the latest annotations from WebCenter.

Note:

In case the annotations can not be loaded or saved (e.g. you are no longer logged in with WebCenter Connector, there are no annotations available for the document, or the document no longer exists) you will get a warning message indicating why loading or saving didn't work.

You can not save annotations, edit annotations or reply to an annotation if the Annotations plugin is older than version 16.1.2, or if the WebCenter Connector plugin or WebCenter server is not the latest version.

3.10. Esko Plug-ins Dashboard

On your Esko Plug-ins Dashboard, you can:

- See which features you use, and how often,
- Learn how many files are processed with your Esko plug-ins,
- Get configurable reports for your company.

To build the dashboard, Esko needs to collect data about your plug-ins usage.

1. Open the Dashboard panel by choosing **Help** > **Esko** > **Dashboard...**
2. Click the **Yes, I want a dashboard** button.
3. Sign in with your Esko ID

   More information about Esko ID can be found *here*

   Note: If you already enabled Dashboard before, you can skip step 2 and 3 steps.
4. Click the **Go to my Esko Plug-ins Dashboard** link to open the Dashboard

3.10.1. Opt Out

At any time, you can opt-out and stop the data collection.

1. Open the Dashboard panel by choosing **Help** > **Esko** > **Dashboard...**
2. Click the **Opt Out** button.

3.10.2. More about the dashboard and data collection

Insights for you and your team

You will get a dashboard for DeskPack and/or for Studio. With these personalized dashboards you can check that you are getting the most out of your software investment. You can filter on those features that are the most valuable to you, and keep track of how often they are used, how many files

are handled, and by how many people. If your colleagues also opt in, you can choose to combine the data in a single dashboard for your company.

Your data is protected

Your data will be available only to Esko, to you and to your colleagues (based on the company code of their Esko IDs). *Learn more about Esko ID* and *check out our privacy policy*.

Help us improve our products

Sharing your usage data with Esko allows us to learn about your configuration and your use of our products. This data enables us to focus on the features that matter the most to you.

What data is collected?

If you enable the dashboard, Esko will collect:

- Basic information about your computer (OS version, language, screen resolution, ...).
- Your version of Adobe Illustrator and which Esko plug-ins are installed.
- Which actions you perform on Esko plug-in, including some of their parameters.

We never record any information that can be used to identify your client or the designs that you work on (such as text statements, barcodes, separation names or filenames).

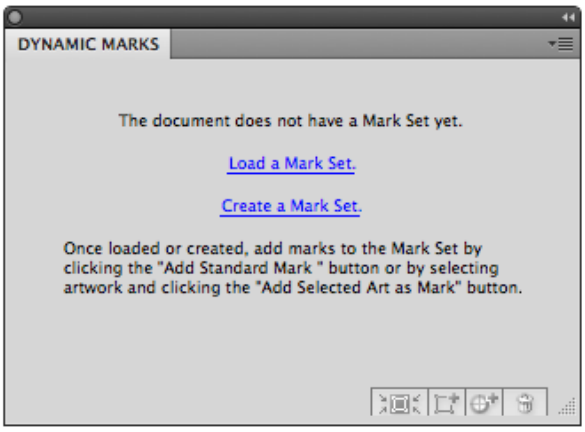
4. Dynamic Marks

4.1. Getting started

Using the Dynamic Marks plugin, you can create sets of marks, add them in a document, and have full control over these marks.

4.1.1. Creating a first Mark Set

1. Open a file in Illustrator. Create some objects you want to use as marks.
2. Go to **Window** > **Esko** > **Dynamic Marks** > **Dynamic Marks** to open the **Dynamic Marks** panel.



3. Click **Create a Mark Set** to start a new Mark Set.

   Note: This step is optional. If no Mark Set is present, you can also immediately start adding marks (see step 4), a new Mark Set will be created automatically.

4. You can add marks in two ways:
   - Select the objects you want to use as mark one by one, and click the **Add Selected Art as Mark** button
   - Click the **Add Standard Mark** button to add a standard mark to the set.
5. From the fly-out menu, select **Save mark set**

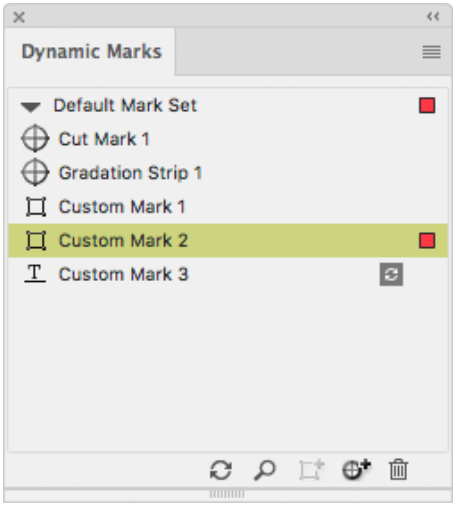
Note:

You can only save a Mark set if the Illustrator file is saved. If not, you will be prompted to do so before saving the Mark Set

4.2. The Dynamic Marks palette

In the Dynamic Marks palette, you can manage the marks in a set.

The palette will show the name of the latest loaded or saved mark set, and all the marks in the set. The icon in front of the mark name will show the type of mark: a standard mark, text, an object, ...



In the palette, you can

- change the name of a mark by double-clicking it
- select and zoom in on a mark, by clicking the button or from the fly-out menu
- add the selected artwork as a mark, by clicking the button or from the fly-out menu. See *Adding objects as Mark* on page 98
- add a Standard Mark, by clicking the button or from the fly-out menu. See *Adding a Standard Mark* on page 97
- remove the selected mark, by clicking the button or from the fly-out menu.

  Note:

  Removing a mark will remove the entry in the Mark Set as well as the actual object.

- update an **On Demand** mark (indicated by the icon) by clicking the Update button . See *Updating Dynamic Marks* on page 98

- expand a mark, by selecting the function in the fly-out menu. Expanding a mark replaces the dynamic mark by a normal object.
- change the order of the marks by clicking and dragging.
  - If the corresponding objects are in the same layer in the Layers menu, their order will be changed the same way.
  - If you change the order in the Layers palette, the marks in the Dynamic Marks palette will change accordingly

  Note that the Marks list shows the topmost mark at the bottom of the list, while the Layers palette works the other way around.

Note: Same as in Adobe Illustrator's Layer palette, there are two different types of selecting in the Dynamic Marks palette:

- If you click the name, the mark is selected in a blue bar, but the actual art is not selected in Adobe Illustrator. This selection is used for Dynamic Marks palette operations (zoom, trash, expand, remove).
- If you click at the right side of the row (or if you select the art using the Illustrator select tools), the mark is showing a colored rectangle, indicating that the actual art is selected in Adobe Illustrator. This selection is used for the Marks Properties.

4.2.1. Adding a Standard Mark

You can add one of the predefined Standard Marks to your Mark set:

1. Click the **Add Standard Mark** button or select **Add Standard Mark** from the fly-out menu
2. Select the Standard Mark you want to add.
3. Click **Add**

The Standard Mark will be added to the Mark Set, and in the current document. You can change its properties in the Dynamic Marks Properties palette. See *Dynamic Mark Properties* on page 98

The Standard Marks currently available are:

- Cut Mark
- Bearer Bars
- Gradation Strip
- Grid Marks
- Corner Marks
- Color Patches
- Image Mark

For more information on the properties for the Standard Marks, see *Specific Mark Properties* on page 103

Note: It is not possible to apply scaling on standard marks. Every time the marks are updated, they will be regenerated at their original size.

4.2.2. Adding objects as Mark

You can add existing objects as a Mark to your set.

1. Select the object you want to use as a mark
2. Click the **Add Selected Art as Mark** button . or select **Add Selected Art as Mark** from the fly-out menu.

   The new Mark will appear in the Dynamic Marks palette. You can change its properties in the Dynamic Marks Properties palette. See *Dynamic Mark Properties* on page 98

   Note: If you select multiple objects, these objects will be grouped and added as one single mark in your set.

4.2.3. Updating Dynamic Marks

By default, all dynamic marks are updated automatically. There are however some exceptions to this.

Changes in the Ink Manager

If the ink list in the document changes after adding the marks, you must click Update Ink List in the Ink Manager for the marks to adjust to the updated ink list. See *Color* on page 101

On Demand marks

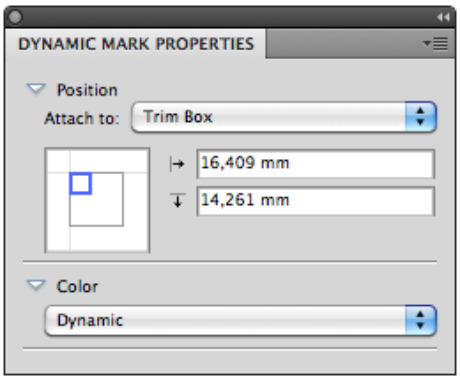
On Demand marks are marks that are not updated automatically. These marks are indicated in the Dynamic Marks palette using this icon: .

These marks will only be updated by clicking the **Update** button .

The only **On Demand** mark at this moment is a Text Mark using the "Ink Coverage" variable.

4.3. Dynamic Mark Properties

You can open the Dynamic Mark Properties by choosing **Window** > **Esko** > **Dynamic Marks** > **Dynamic Mark Properties** or by choosing **Show Properties Palette** from the flyout menu of the Dynamic Marks palette.



4.3.1. Position

The position of a mark is based on 3 settings:

Attach to

The position of the mark can be based on

- Any page box: Media Box, Crop Box, Bleed Box, Trim Box or Art Box

> **Note:**
>
> - a Page Box that is not defined in the file, will be greyed out
> - If you load a marks set that uses a page box not defined in the current file, the Trim Box is used instead, and a warning is shown
> - You can't delete a Page Box if there 's a mark attached to it.

- another dynamic mark
- a PowerLayout Repetition, such as "PowerLayout Grid 1"
- Named Art

Named Art is any art in your Illustrator document, that you gave a name in the Layers palette: browse to the object you want to name in the Layers palette, double click the default name (eg. <path>) and enter a name.

When selecting **Named Art...**, you get a separate dialog, in which you can either type the name of the Named Art you want to use, or select it from the dropdown at the right. Once Named Art has been used, it remains available in the **Attach To** dropdown.

Named Art is only possible on objects, not on groups. Named Art can't be hidden or locked.

> **Note:** Standard Marks will be automatically attached to a currently selected PowerLayout Standalone grid or another selected dynamic mark. If no grid or dynamic mark is selected, the Standard Mark is attached to the Trim Box.

A PowerLayout Standalone grid is a Step and Repeat of a single file or object(s), generated by the PowerLayout Standalone plug-in. If such a grid is available in the document, you can select its name in the dropdown. For more information, see the PowerLayout Standalone documentation.

Positioning

The way the mark is attached, can be chosen by clicking and dragging the blue square (representing the mark) to the desired position on the grey square (representing the **Attach To** reference). Each square has 9 reference points (top left center and right, middle left center and right, and bottom left center and right), so you have 81 different ways of positioning the mark.

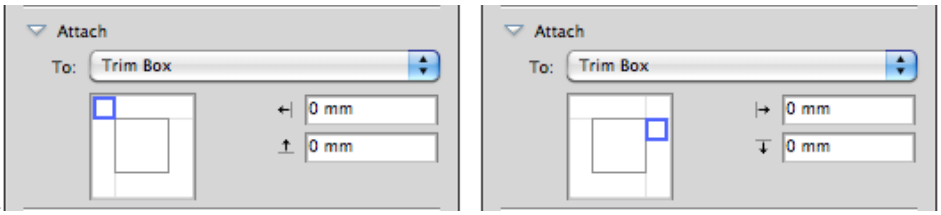
This setting is not available for Bearer Bars and for Cut Marks.

In the example underneath, the top center of the (bounding box of the) mark will be placed on the left bottom corner of the (bounding box) of the reference defined in the Attach to field.

Note: If you create a mark from an existing object, the Positioning settings (the blue rectangle) will be automatically set, using the smallest offset possible while keeping the object at the same location.

Offset

In the offset fields, you can move the mark based on the defined position. The direction of the offset (up, down, left or right) depends on the positioning, and is shown by the arrows.



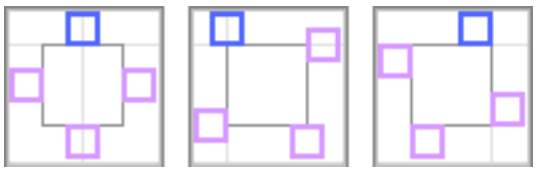
Note: You can also manually move marks. In that case, the offset will automatically adjust to the new location. The other settings (Attach To and Positioning) will NOT change.

Repeat

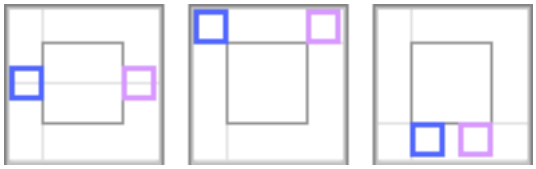
For custom marks, you can use the **Repeat** buttons, to choose if the mark should be repeated or not.

From left to right:

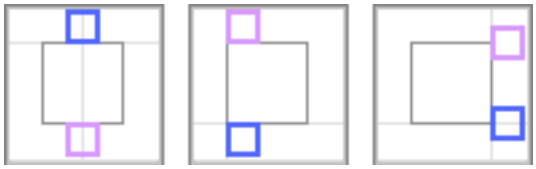
- No repeat
- Repeat on all 4 sides. The positions of the marks are rotated 90º around the center of the Attach To object. Examples:



- Repeated horizontally. The positions of the marks are mirrored over the vertical center line. Examples:



- Repeated vertically. The positions of the marks are mirrored over the horizontal center line. Examples:



Note: For vertical and horizontal repeat, the position of the marks is mirrored, but the actual marks are rotated 180 degrees.

4.3.2. Color

The color of a mark can be one of these settings:

Registration

The mark will be colored with 100% of every ink used in the document. If you change the tint to e.g. 42%, the mark will get 42% of every ink used in the document.

Changing the inks in the document can change the color of the mark.

Note: If you manually change the color of a mark set to Registration, its color setting will change to "Static" (see below), using the newly set color.

Static

If color is set to "Static", the current color is stored, based on the actual inks. The color of the mark will not change if the order of the ink list is changed.

Note:

When placed on an existing document, "Static" marks are the only marks that affect the ink list: the inks used in the mark will be added if necessary.

Dynamic

If color is set to "Dynamic", the current color is stored, but based on the ink positions in the Ink Manager, and not the actual inks.

For example, if the first ink is Cyan, a 100% cyan mark is stored as "100% of the first ink". If the first ink is different (by changing the ink order, or by placing the mark on a different file), the mark will become 100% of the first ink.

Note: If the ink list in the document changes after adding the marks, you must click **Update Ink List** in the **Ink Manager** for the marks to adjust to the updated ink list.

Darkest

The mark will be colored with 100% of the darkest ink used in the document. You can't change the percentage for "Darkest" ink, it will always be 100%.

Changing the inks in the document can change the color of the mark. Technical inks and Processing Step Inks are not used in the mark.

Note: If you manually change the color of a mark set to Darkest, the color will change back to the darkest ink at the next mark update.

Black or Darkest

If the document contains a Process Black ink, the mark will be colored with 100% Black, otherwise the darkest ink used in the document is used. You can't change the percentage for "Black or Darkest" ink, it will always be 100%.

Changing the inks in the document can change the color of the mark. Technical inks and Processing Step Inks are not used in the mark.

Black

The Mark will be colored with 100% Process Black, regardless of the inks already used in the document.

Note: To ensure Marks using this color are supported on previous versions of Automation Engine, it will be saved as a 100% solid black "Static" color when exporting a Mark Set to Automation Engine. See *Export Mark Sets* on page 127

Fill / Stroke

For custom marks and for Color Patch marks, you can define both the Fill and the Stroke Color. For Stroke, you have an extra option **Same as fill**

Defaults

Every dynamic mark has a default color attribute:

Mark Type	Available Color Options	Default
Custom mark (plain object)	all*	Dynamic
Cut Mark	Registration, Darkest, Static	Darkest
Text	all	Dynamic
Image Mark	Static, Dynamic**	Static
Dynamic Objects (Barcode, Panel, Table)	all	Static
Bearer Bar	all	Registration

Mark Type	Available Color Options	Default
Gradation Strip	No Color Options	not applicable
Grid Marks	Registration, Darkest, Static	Registration
Corner Marks	Registration, Darkest, Static	Registration
Color Patch	only applicable for stroke: all	same as fill

(*): A Custom mark created from a mesh or gradient object will always have color attribute "Static". This can't be changed.

(**): EPS image marks can only be Static.

Note: A Gradation Strip doesn't allow setting Color options. A Gradation Strip always uses every ink, except for technical inks.

Inks

When using **Dynamic** color, you can choose what inks to include: **All**, **Only Technical**, **Only Printing** or **Custom** when working in Normalized PDF, or **All**, **Only Processing Step Inks**, **Only Artwork Ink** or **Custom** when working in PDF+.

When choosing Custom, you can set a combination of rules to define what inks should be included, based on the Printing Method, Ink Names or Ink Group (process or spot colors).

For any other color option, you can't change the drop down: for Static color and Registration it is fixed at "All", while for "Darkest" it is fixed at "Only Printing".

If the option **Include Varnish Inks** is disabled, inks set as "Varnish" will not be taken into account for Dynamic color.

Note: When using **All** (inks) while working in PDF+, the **Include Varnish Inks** option will always be enabled.

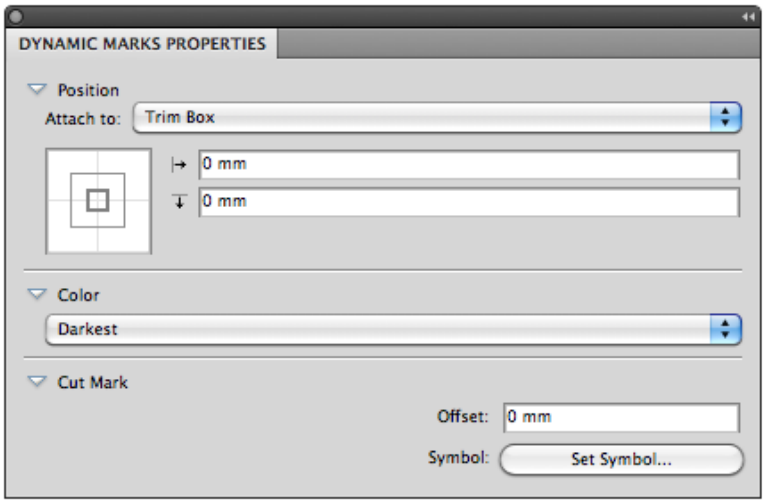
4.3.3. Specific Mark Properties

Standard Marks have, beside Position and Color, some specific properties.

Also Text Marks have specific properties, allowing to create dynamic text marks.

Cut Mark Properties

Cut Marks are created from a symbol named "CutMark", and are by default 0,1mm wide and 10mm long.



Position: Cut Marks will be automatically attached to a currently selected PowerLayout Standalone grid or another selected dynamic mark. If no grid or dynamic mark is selected, the Cut Mark is attached to the Trim Box.

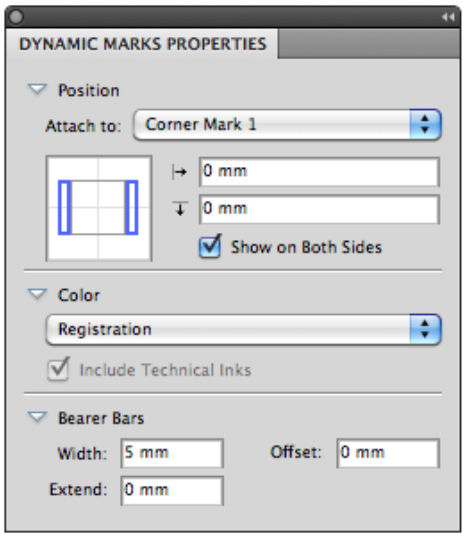
Color: Cut Marks are by default in "Darkest" color.

Offset: allows to define the offset for the Cut Marks. A positive offset will move the Cut Marks to the outside.

Symbol: allows to change the symbol used for the Cut Mark. See *Changing the Symbol of a Standard Mark* on page 124,

Bearer Bars Properties

Adding a Bearer Bars mark will create two bars, one on each side, left and right (default) or top and bottom. The bars will automatically take the size (vertical or horizontal) of the "Attach" selection.



Position: Bearer Bars will be automatically attached to a currently selected PowerLayout Standalone grid or another selected dynamic mark. If no grid or dynamic mark is selected, the Bearer Bars are attached to the Trim Box.

If the **Show on Both Sides** option is selected, you will get a Bearer Bar on both sides (top and bottom, or left and right).

By positioning the blue rectangles, you can choose between a vertical or horizontal orientation.

Color: Bearer Bars are by default in Registration color.

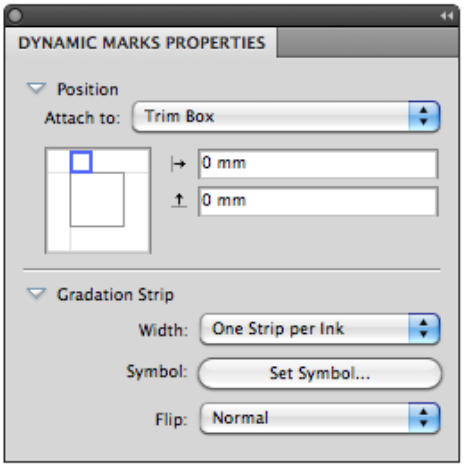
Width: The width of the Bearer Bar.

Extend: allows to extend the Bearer Bar on both size. Entering e.g. +5mm will extend the Bearer Bar by 5 mm on both ends.

Offset defines the distance between the Attach to object and the Bearer Bars.

Gradation Strip Properties

Gradation Strips are created from a symbol named "GradationStrip", and are by default 3 rectangles of 5 x 5mm, horizontally, colored 40%, 80% and 100%, one strip per ink.



Position: Gradation Strips will be automatically attached to a currently selected PowerLayout Standalone grid or another selected dynamic mark. If no grid or dynamic mark is selected, the Gradation Strip is attached to the Trim Box.

If you change the Positioning setting (the blue rectangle), the gradation strip will rotate automatically based on the position of the blue rectangle.

Width: The width can be set to "One Strip per Ink" or to "Repeat to Fit".

Symbol: allows to change the symbol used for the Gradation Strip Mark. See *Changing the Symbol of a Standard Mark* on page 124,

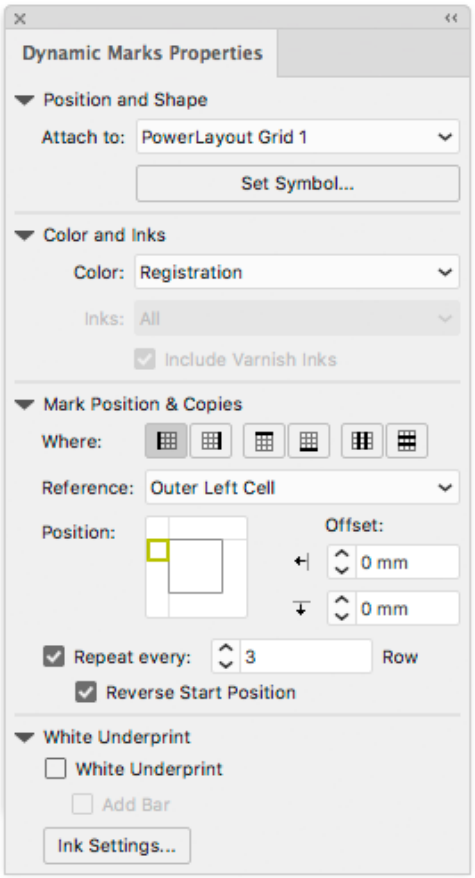
You can use any type of art in the symbol, but only paths and compound paths will be colored. If you will use any text in your Gradation Strip symbol, it will be automatically colored with darkest ink.

If you change the default Gradation Strip symbol, the default position will be based on the size of the symbol. If the width of the symbol is bigger than its height, the Gradation Strip will be created horizontally by default. If the height is bigger, the Gradation Strip will be created vertically by default.

Flip: when set to "Normal", the gradation is built from left to right, when set to "Reverted", the gradation strip is built from right to left.

Grid Mark Properties

Grid Marks are created from a symbol named "GridMark", and are by default a rectangle of 5 x 5mm, in Registration color.



Position: Grid Marks will be automatically attached to a currently selected PowerLayout Standalone grid. If no grid is selected, you will get an error message.

Mark Positions & Copies:

Using the **Where** buttons, you can define where you want the Grid Marks:

- on the left side of the Repeat
- on the right side of the Repeat
- on top of the Repeat
- below the Repeat
- in between the columns
- in between the rows.

Note: The "in between" options can not be used in combination with **stagger**. If you enable stagger while grid marks are set to "in between", or if you load a mark set containing such a mark, the grid marks will be placed at the side, and a warning will be given.

For the Mark Position, you can (besides the normal Position settings) set the **Reference**. The Reference defines what cell or column to use as a reference:. You can set the Reference to **Outer Left Cell** or **Outer Right Cell**, or to **Outer Left Column** or **Outer Right Column**.

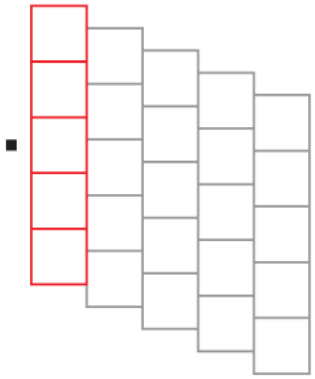
If the Grid Marks are placed on the top or bottom of the repeat, the options become top/bottom instead of left/right, and Row instead of Column.

If a **Column** is used, a single Grid Mark is placed, using the column as reference.

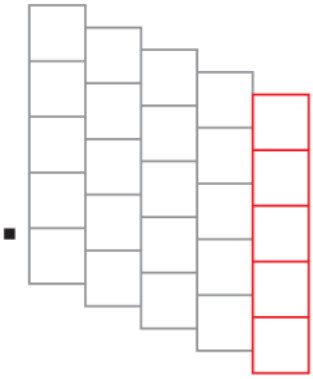
In case you use a **Cell** as Reference, you can choose to **Repeat** the grid mark every Row (or Column), every 2 rows, ect...

The examples underneath shows a 5 by 5 repeat with staggering. The Position is always centered at the left side.

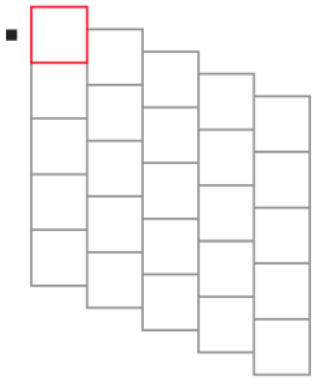
Outer Left Column:



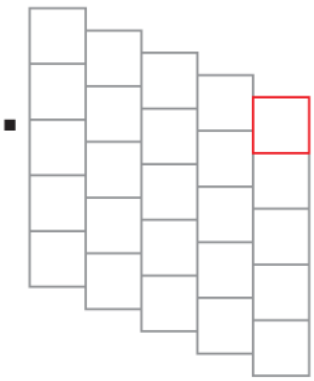
Outer Right Column:



Outer Left Cell, no repeat:

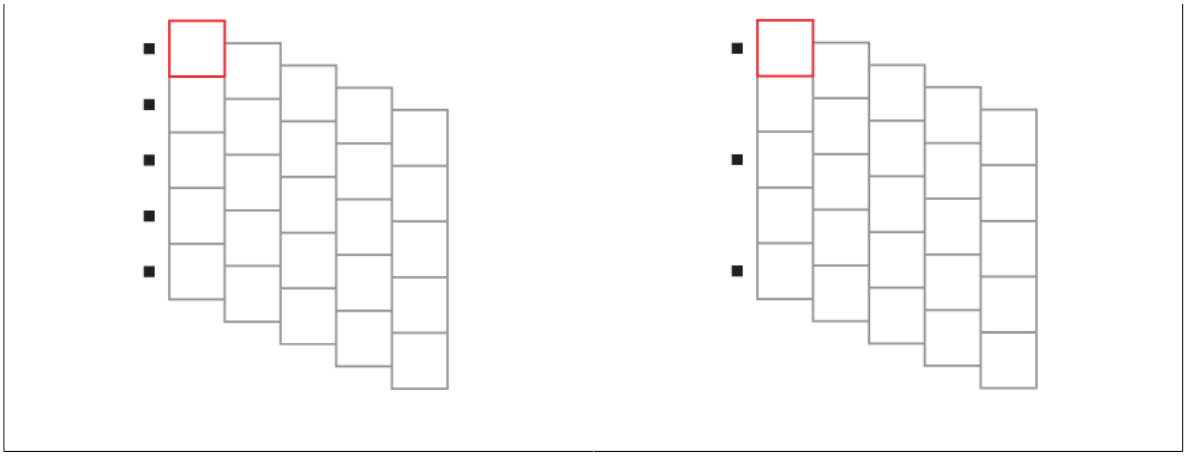


Outer Right Cell, no repeat:



Outer Left Cell, repeat every 1 rows:

Outer Left Cell, repeat every 2 rows:



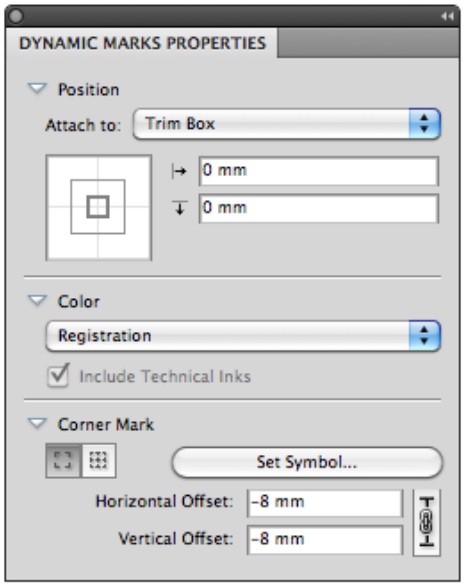
If you enable **Reverse Start Position**, the repeat will start at the opposite side (top instead of bottom, left instead of right, ...). This option is only available if **Repeat Every** is enabled and uses a value of 2 or more.

Symbol: allows to change the symbol used for the Gradation Strip Mark. See *Changing the Symbol of a Standard Mark* on page 124.

White Underprint: see *White Underprint* on page 123

Corner Mark Properties

Corner Marks are created from a symbol named "CornerMark".



Bounding Box Corners or **Repetition Corners**:

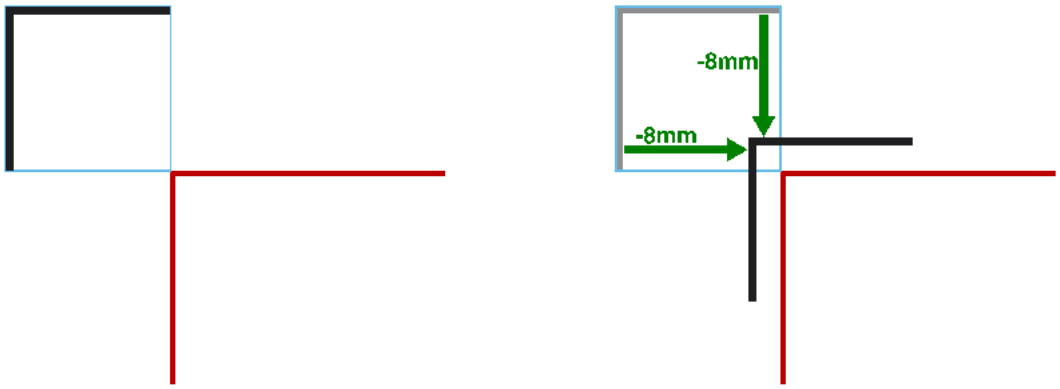
Using the buttons, you can define if you want corner marks on the bounding box of the selected **Attach To** area, or on the corners of every one-up. This option is only available if you attached the corner mark to a Repeat Grid.

Set Symbol: allows to change the symbol used for the Gradation Strip Mark. See *Changing the Symbol of a Standard Mark* on page 124.

Offset allows to define the offset between the corner and the corner mark. If the lock is enabled, vertical and horizontal offset are kept the same. If the lock is disabled, you can enter different values for vertical and horizontal offset.

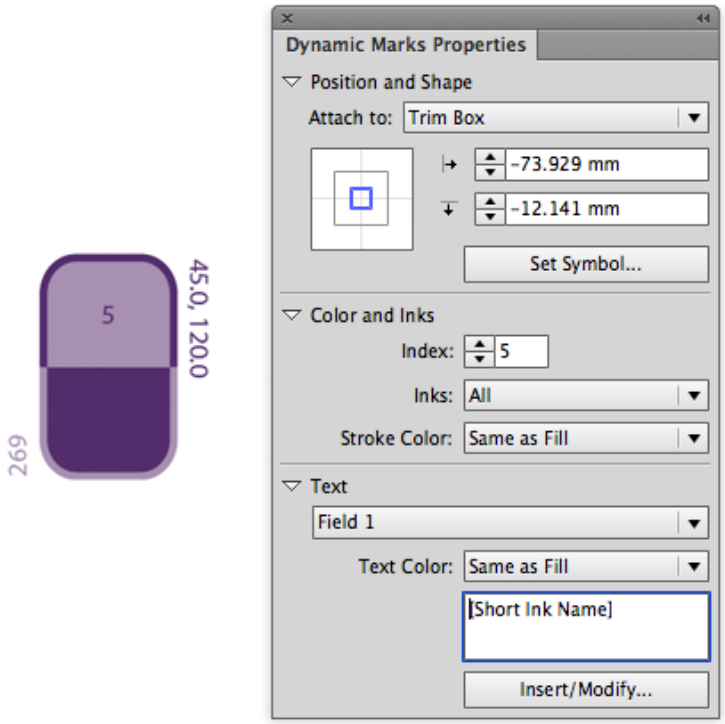
If an offset of 0mm is used (in the image underneath on the left), the bounding box of the corner mark is placed on the outside of the selected page box. The page box is shown in red, the corner mark in black and the bounding box in blue.

In the image on the right, the default offset of -8mm is used. You can see the Corner Mark being moved 8 mm to the inside, based on the original position. Since the default symbol is 10 mm by 10mm, this default setting places the corner mark at 2 mm to the outside of the selected page box.



Color Patch Properties

Color Patch marks are created from a symbol named "ColorPatch".



Set Symbol: allows to change the symbol used for the Color Patch Mark. See *Changing the Symbol of a Standard Mark* on page 124.

A Color Patch mark is dynamically colored in one ink. The **Index** defines the ink to use, based on the ink position in the Ink Manager.

You can however define a different color for the text and for the stroke.

The number of text fields depends on the number of text fields in the symbol. When using the default symbol, a Color Patch contains 3 text fields, set to the short ink name, the ruling and angle, and the index.

Note: When you create a symbol for Color Patch using exact the same variable names (case sensitive), Dynamic Marks will automatically use these variables. This way, you can quickly create a Color Patch symbol with working variable text fields.

Text Mark properties

A Text Mark is a Custom Mark created from a text object. Text Marks can consist of static and dynamic text.

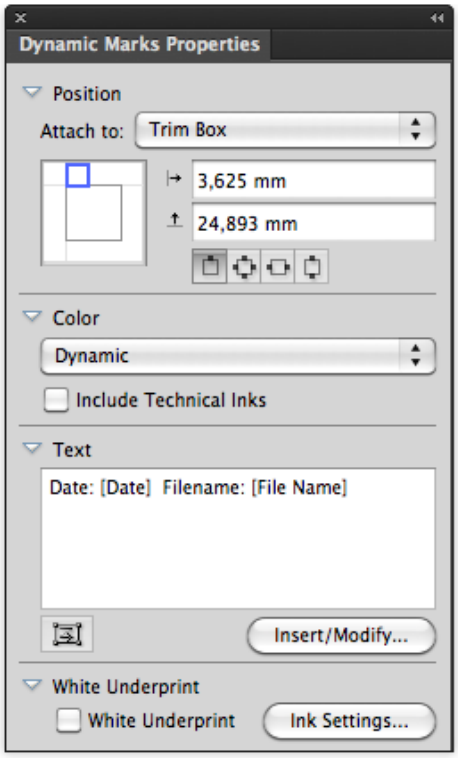
1. Create a text object, using the font and text settings you want to use, and add it as a Custom Mark.

   For more info on adding objects as Mark, see *Adding objects as Mark* on page 98

2. Open the Dynamic Mark Properties palette, by choosing **Window** > **Esko** > **Dynamic Marks** > **Dynamic Mark Properties**

   The existing text is **static**, which means it won't change when you use the Mark into another document, or if the document changes.

   You can make all or part of the text **dynamic**, to have it change with every document you use your mark into.

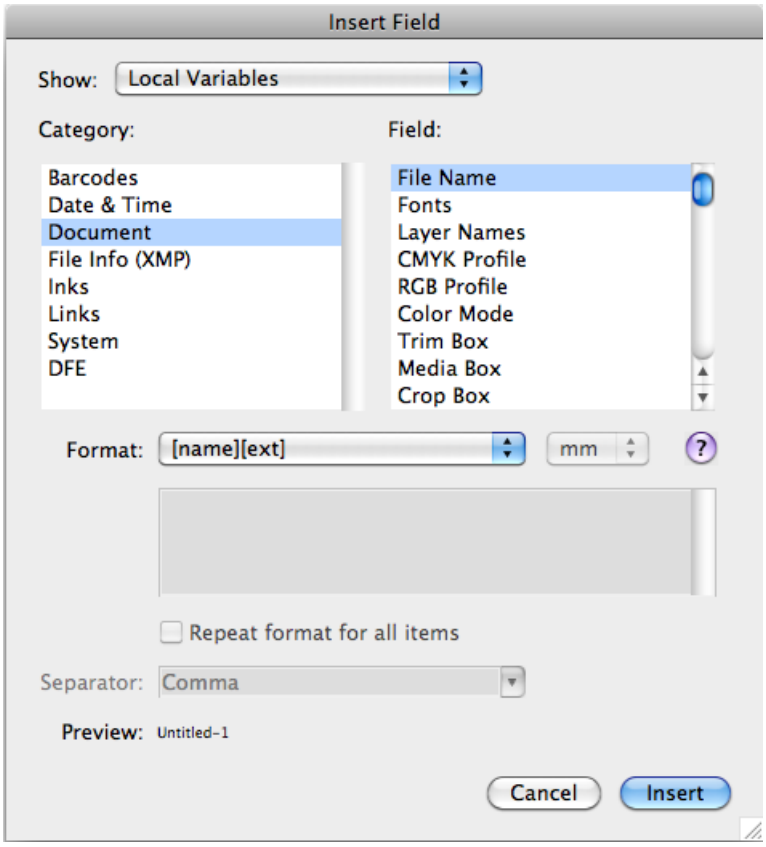


Note: If you want to have some static text, just leave that part of the text as it is (or type in new text) in the **Text** area.

3. To get dynamic text, you need to insert dynamic **fields**.

   Place your cursor where you want the field to be, or select the text to replace with a field, and click the **Insert / Modify ...** button.

4. In the **Insert Field** dialog that opens, choose the fields to insert:
   a) Select **Local Variables** to select variables from the local file, or **Server Variables** to use SmartNames from the Automation Engine server. In that case, all Database queries defined on the server will be available, as well as all job and product parameters.
   b) choose a field **Category**, for example **Barcodes**, **Date & Time**...
   c) in that **Category**, choose the **Field** you want to use (see *Categories and Types* on page 112 for a list of available categories and fields),
   d) if applicable, choose the **Format** to use for your chosen **Field** (see *Formatting Dynamic Fields* on page 116 for details),



Note: The **Preview** line shows how the field will be resolved in the current document.

e) when you are satisfied with how your field will look like, click **OK**.

The dynamic parts of a text object will appear between square brackets.

White Underprint allows to add White Underprint to your Mark. See *White Underprint* on page 123

Categories and Types

Local Variables

Barcodes	• Number of Barcodes • Barcode Type • Barcode Code • Bar Width Reduction • Barcode Magnification • Barcode Device Compensation • Barcode Narrow Bar
Date & Time	• Date • Time • Date and Time
Document	• File Name

	• Fonts • Layer Names • CMYK Profile • RGB Profile • Color Mode • Trim Box • Crop Box • Bleed Box • Media Box • Art Box
File Info (XMP)	• Description • Author • Document Title • Author Title
Inks	• Number of Inks • Number of Technical Inks[1] • Number of Processing Step Inks[2] • Ink Names • Technical Ink Names[1] • Processing Step Ink Names [2] • Short Ink Names • Abbreviated Ink Names • Ink Types • Ink Dotshapes • Ink Angles • Ink Rulings • Printing Method • Ink Coverage
Links	• Placed Files • XML Content Files • Structural Design File
System	• Illustrator Version • Creative Suite Version • OS Type • OS Version • Short User Name • Full User Name

Server Variables

File Info	• Extension of File

	• File • File Type • First Folder of File • Folder of File • Folder of Input
Job Info	• Job Name • Order ID • Sub Order ID • Description • Due Date • Project ID • Last Actor • Job URL • Category • Category2 • Category3 • Category4 • Category5 • Category6 • Category7 • Customer Ref • CSR • CSR Email • Customer ID • Customer Name • Customer Description • Due Day • Due Time • Job Container Name • Job Container URL • Job CT URL • Job ID • Name of Folder of Job • JI Legacy Job (JDF) • JI Originator (JDF) • PS Printer Name • PS Printer Name (JDF) • Job Parameters • Number of Barcodes • Barcode Type • Barcode Code • Bar Width Reduction • Barcode Magnification • Barcode Device Compensation • Barcode Narrow Bar • Number of Inks • Number of Technical Inks[1]

	• Number of Processing Step Inks[2] • Ink Names • Technical Ink Names[1] • Processing Step Ink Names [2] • Short Ink Names • Ink Types • Ink Dotshapes • Ink Angles • Ink Rulings • Ink Printing Methods
Global	<user defined smart names>
Misc	• Server
Path Info	• File URL • Job Temp URL • URL Folder of Input • URL of Input
Product Info	• Customer's Product Reference • Product Amount • Product Custom Field 1 • Product Custom Field 2 • Product Custom Field 3 • Product Customer Description • Product Customer ID • Product Customer Name • Product Description • Product ID • Product Name • Product Part Custom Field 1 • Product Part Custom Field 2 • Product Part Custom Field 3 • Product Part Datazone • Product Part Name • Product Part Status
Job Barcodes	• 2of5 • Bobst • CLF8 • Codabar • Code 39 • Code 128 • Code 39 Extended • Data Matrix ECC 200 • EAN 8

	• EAN 13 • GS1 128 • GS1 Databar Omnidirectional • GS1 Databar Expanded • GS1 Databar Expanded Stacked • GS1 Databar Limited • GS1 Databar Stacked • GS1 Databar Stacked Omnidirectional • GS1 Databar Truncated • GS1 Datamatrix • GS1 US Coupon Interim • HIBC-39 • HIBC-128 • ITF-14 • ITF-16 • Int. 2of5 • Kurandt • Laetus Pharma • MS7 • MSI • Marks and Spencer • NDC-HRI • PDF417 • MicroPDF417 • Plessey • PZN • PZN8 • Paraf Italy • QR • MicroQR • UPC-A • UPC-E • UPC-SCS

[1]: Only when working in Normalized PDF.

[2]: Only when working in PDF+. For more information on Normalized PDF vs PDF+ we refer to the Data Exchange documentation. See *https://www.esko.com/en/support/product?id=Esko%20Data%20Exchange%20for%20Adobe%20Illustrator*

Formatting Dynamic Fields

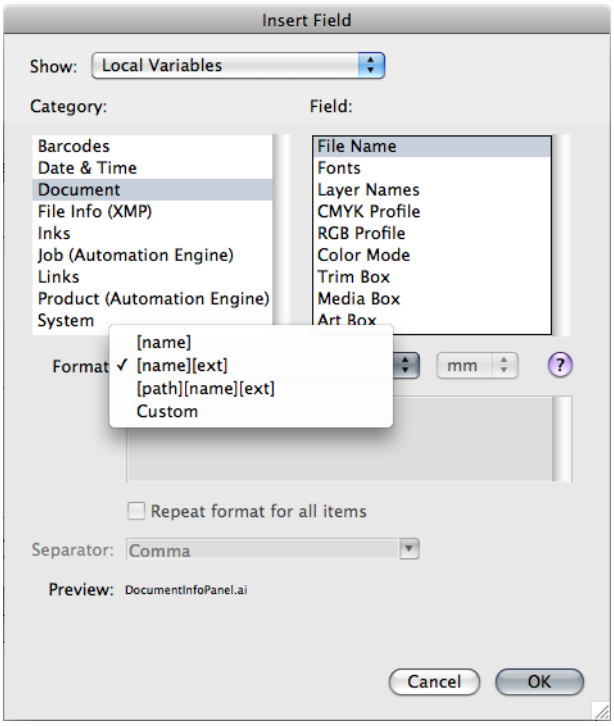
You can format certain fields so they look a certain way (for example, have the date in European or American format).

You can use predefined formats or create custom formats. You can also choose to use a different format for each field, or the same format for all fields.

Using an Existing Format

- You can choose an existing format to apply to your field in the **Format** list.

  For example, use **[name][ext]** to display the file name and extension when using the **File Name** field.

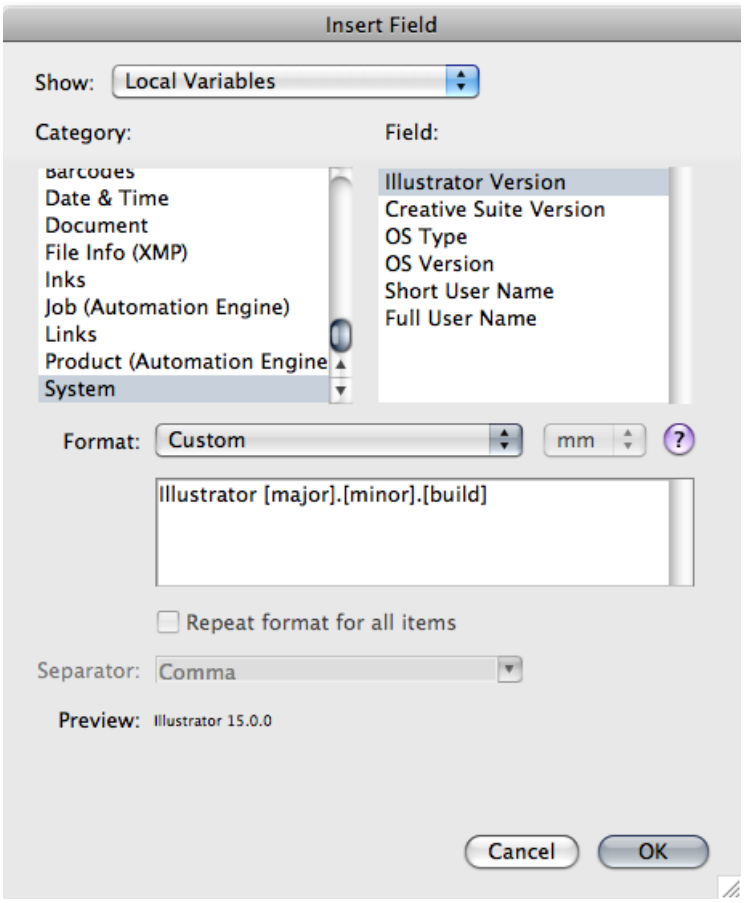


Tip: Hover over to get more information about the different formats.

Defining a Custom Format

To define your own field format:

1. Choose **Custom** in the format list.
2. Define your format in the box below (using the predefined formats and the information under for help).



Note:

- The items in square brackets, like **[major]**, are dynamic, the rest of the text is static.
- Use the **Enter** key to get a new line.

3. Check how your format resolves for the current file in the **Preview** line.
4. Click **OK** when you are satisfied.

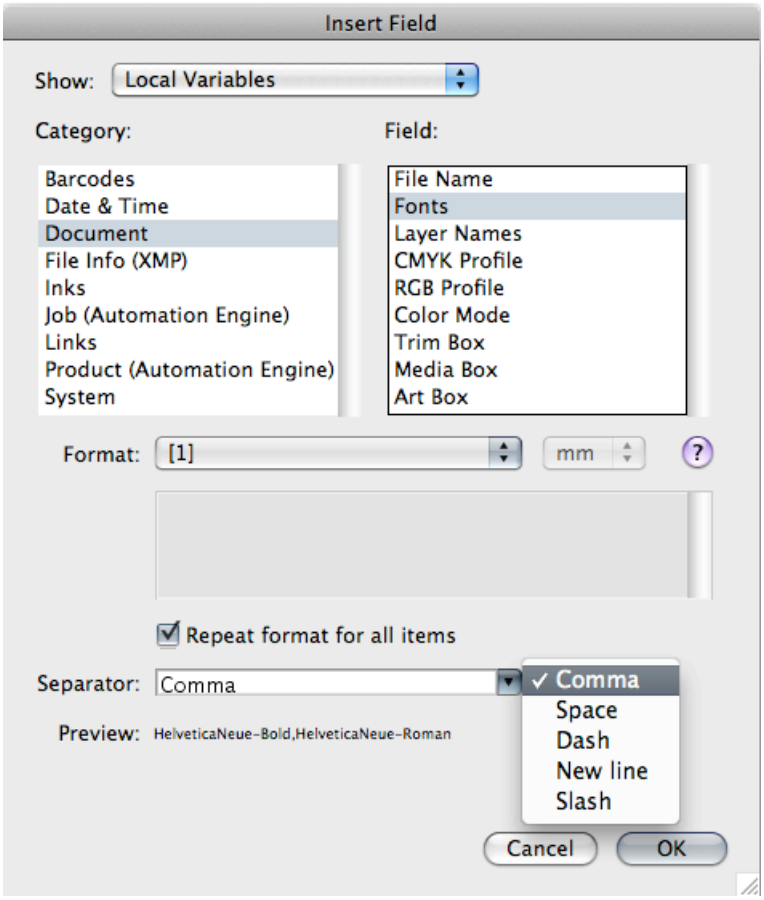
Repeating the Format for All Items

If the field you want to use can have several values (e.g. **Fonts**, **Ink Names**, **Placed Files**...), you can put them all in one dynamic object.

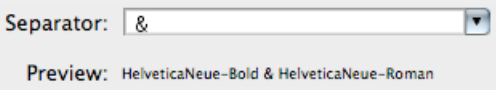
You can also set the same format for all those values at once.

After choosing an existing format or defining a custom one:

1. Select **Repeat format for all items**.
2. Choose the **Separator** you want to use between the values (**Comma**, **Space**...).



Note: You can also specify your own separator by typing it directly in the **Separator** list.



3. When you are satisfied with what you see in the **Preview**, click **OK**.

Formatting Dynamic Fields for Inks

When using variables of the category **Ink**, the **Format** field is used to select the ink based on the ink index.

If for example you use the variable "Ink Names", and set the Format to [3], the variable will return the Ink Name for the 3rd ink in the document, e.g. "Process Yellow".

Note: This does not apply to the "Number of Inks" and "Number of Technical Inks" variables.

Ink Coverage

When using the **Ink Coverage** variable, you can set some additional parameters.

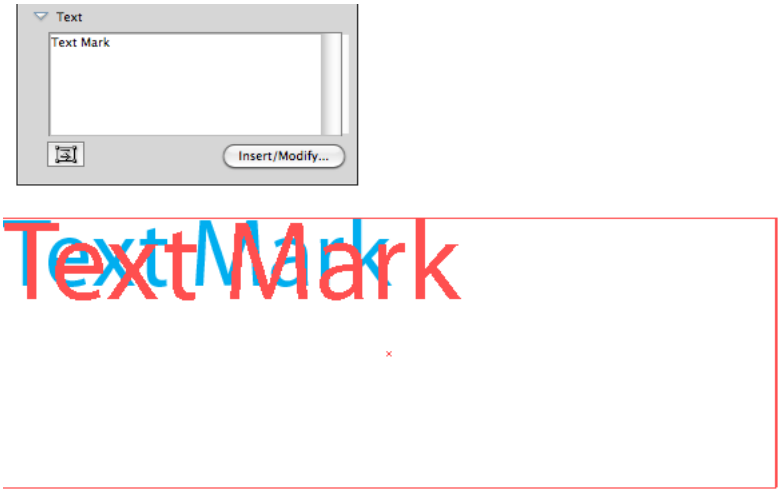
- The **Area** defines in which page box the Ink Coverage will be calculated. You can choose any defined page box.

- The **Unit**. This can be pt^2, in^2, mm^2, cm^2 or a percentage of the total area (%). When possible, the area unit corresponding to the current Adobe Illustrator unit is used, otherwise it will be %.

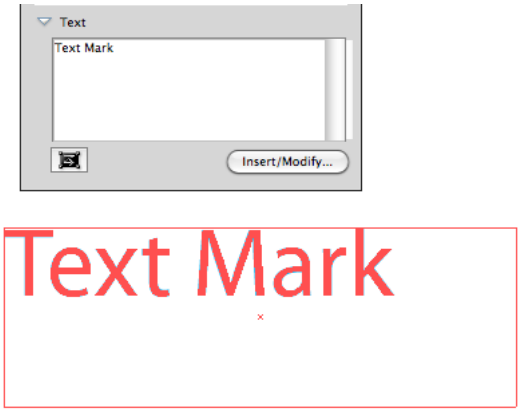
Important: If you use the **Ink Coverage** variable, the dynamic mark becomes an "On Demand" mark, so it will not be updated automatically. See *Updating Dynamic Marks* on page 98

Reflow text

If you create a custom mark based on text in a text frame, resizing using standard transform tools will resize the text "as is" instead of reflowing the text inside the resized text box.



If the **Reflow Text** option is enabled, resizing using standard transform tools will resize the text box, and the text will reflow inside the resized text box.



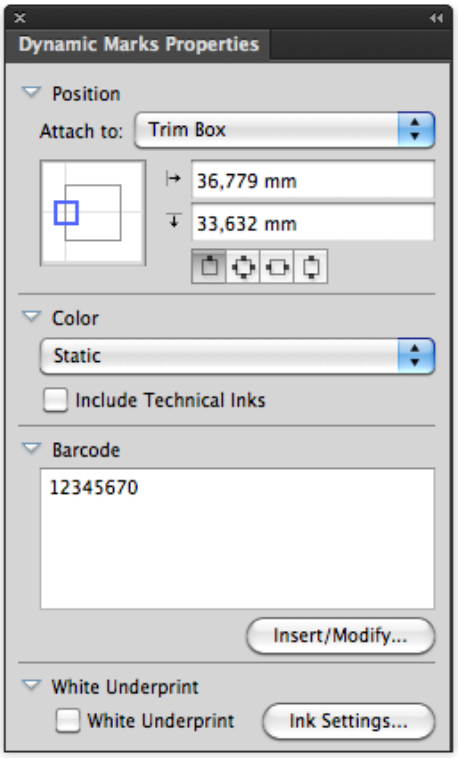
Barcode Mark properties

A Barcode Mark is a Custom Mark created from a Barcode object. For more information on creating barcodes, please refer to the Dynamic Barcodes documentation.

1. Create a barcode, using the barcode type and settings you want to use, and add it as a Custom Mark.
   For more info on adding objects as Mark, see *Adding objects as Mark* on page 98
2. Open the Dynamic Mark Properties palette, by choosing **Window** > **Esko** > **Dynamic Marks** > **Dynamic Mark Properties**

The existing Barcode is **static**, which means it won't change when you use the Mark into another document, or if the document changes.

You can make all or part of the code **dynamic**, to have it change with every document you use your mark into.



3. To get a dynamic barcode, you need to insert dynamic **fields**.

   Place your cursor where you want the field to be, or select the text to replace with a field, and click the **Insert / Modify ...** button.

4. In the **Insert Field** dialog that opens, choose the fields to insert:
   a) choose a field **Category**, for example **Barcodes**, **Date & Time**...
   b) in that **Category**, choose the **Field** you want to use (see *Categories and Types* on page 112 for a list of available categories and fields),
   c) if applicable, choose the **Format** to use for your chosen **Field** (see *Formatting Dynamic Fields* on page 116 for details),

      Note: The **Preview** line shows how the field will be resolved in the current document.

   d) when you are satisfied with how your field will look like, click **OK**.

      The dynamic parts of a barcode will appear between square brackets.

Note: Only the barcode's code can be changed after making. You can not change the barcode type or other settings after creating a Mark from a bar code. To change these settings, you have to delete the Mark and create a new one.

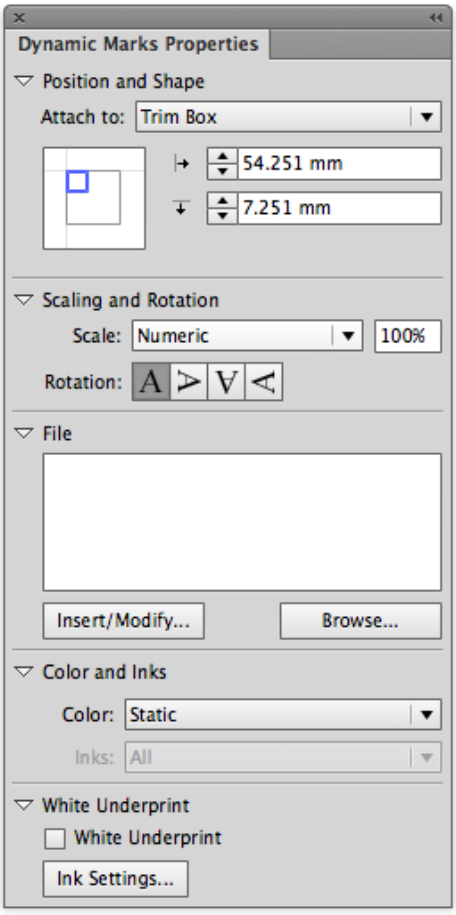
White Underprint allows to add White Underprint to your Mark. See *White Underprint* on page 123

Image Mark properties

An image Mark is a mark created from a linked image

1. There are two ways to create an Image Mark
   - Click the **Add Standard Mark** button or select **Add Standard Mark** from the fly-out menu, and choose **Image Mark** as type.
   - Place an image (supported file formats are JPG, PDF, TIFF, EPS and PSD) as a link, and add it as a Custom Mark. For more info on adding obejcts as Mark, see *Adding objects as Mark* on page 98
2. Open the Dynamic Mark Properties palette, by choosing **Window** > **Esko** > **Dynamic Marks** > **Dynamic Mark Properties**

   If the Image Mark was created from an existing image, the Dynamic Mark Properties will reflect the properties of this image: its position attached to the top left corner of the trim box, and the path of the linked file.



3. Set the **Scaling**
   - When set to **Numeric**, you can enter the scaling in %.

- **Scale to Fit** will scale the image proportionally to fit the object defined in the "Attach to" field. You can use this for example to fit the image inside a named object. The % field will reflect the current scale factor.
- **Downscale to Fit** is the same as "Scale to Fit", but the image will only be downscaled (if necessary), not upscaled. The % field will reflect the current scale factor.

4. Set the **Rotation** for the image using the buttons
5. Use the **File** field to set the path for the linked image. If the path is valid, the image will be shown in the document. Otherwise, a placeholder is shown.

   If you used a placed image to create the Image Mark, its file path will be entered automatically.

   You can enter the path manually, or use the **Browse** button.

   You can use dynamic text in the path, e.g. the Job Folder. Use the **Insert/Modify** button. For more information on dynamic text, see *Text Mark properties* on page 110
6. **Color** can be set to Static or Dynamic. For an EPS image, only Static is allowed.

   Note: If you switch from Dynamic to Static, the colors from the original file are used. If there is a difference in the number of channels between two real images, the mark will switch back to static.
7. **White Underprint** allows to add White Underprint to your Mark. See *White Underprint* on page 123

Note: Image marks can NOT be modified (rotating, channel mapping, etc) outside of the Dynamic Marks Properties palette.

White Underprint

White Underprint allows you to create a white background underneath the selected marks. This white background can be necessary when printing on transparent or metal material. White Underprint is available for Text Marks, Barcode Marks and Grid Marks

White Underprint Object

White Underprint objects will be created in a top-level "White Underprint" layer, and will be put in overprint.

The White Underprint object will be

- a solid rectangle, using the bounding box of a **Text Mark**
- a solid rectangle, using the bounding box of a **Barcode Mark**
- a solid rectangle, using the bounding box of a **Grid Mark**

The **Add Bar** option, available for Grid Marks, will stretch the White Underprint over the full size of the Media Box (or Trim Box if no Media Box is defined).

- For vertical grid marks, the White Underprint object will be a vertical bar, using the width of the grid mark, and the height of the Media Box
- For horizontal grid marks, the White Underprint object will be a horizontal bar, using the height of the grid mark, and the width of the Media Box

If the Mark is modified, deleted or expanded, the White Underprint will also be modified, deleted or expanded.

White Underprint Ink

The Ink used for White Underprint on dynamic marks can be defined by clicking the **Ink Settings** button, and entering the name of the Ink to be used for White Underprint.

In case the defined ink doesn't exist yet, a new spot color will be added to the swatches, using the Ink name and the Color patch.

When the name of an existing swatch is entered, this ink will be used for White Underprint.

Note: White Underprint can only use Spot Colors. If an existing swatch name is entered, and the swatch is not a spot color, a warning will be generated: "A swatch by this name already exists but is not defined as a Spot Color".

If you change the White Underprint ink, all White Underprint objects on dynamic marks in the open document will be changed as well.

The White Underprint ink definition is saved in the Mark Set. If you load a Mark Set containing a different White Underprint ink definition as in the open document, you can choose if you want to keep your White Underprint ink, or if you want to load the White Underprint ink definition from the Mark Set.

4.3.4. Changing the Symbol of a Standard Mark

You can change the Symbol used for a Standard Mark in the Dynamic Mark Properties, by clicking the **Set Symbol** button, and selecting the desired Symbol from the list.

To change or add Symbols,

1. In the Dynamic Marks palette, select **Open Symbol Library** from the fly-out menu.
   The file `DynamicMarks_CS6.ai` (CS6) or `DynamicMarks_AI18.ai` (CC2014 and CC2015) will be opened.
2. Open the Illustrator Symbol Library by choosing **Window** > **Symbols** and use the Illustrator tools to add, edit, remove, duplicate, ... the symbols defined in the file.
3. Save and close the Dynamic Marks file.

The new and modified symbols will now be available when clicking **Set Symbol** in the Dynamic Mark Properties.

4.4. Mark Sets

When no mark set is loaded, you get the option to load a mark set, or to create a new set.

From the Fly-out menu of the Dynamic Marks palette, you can

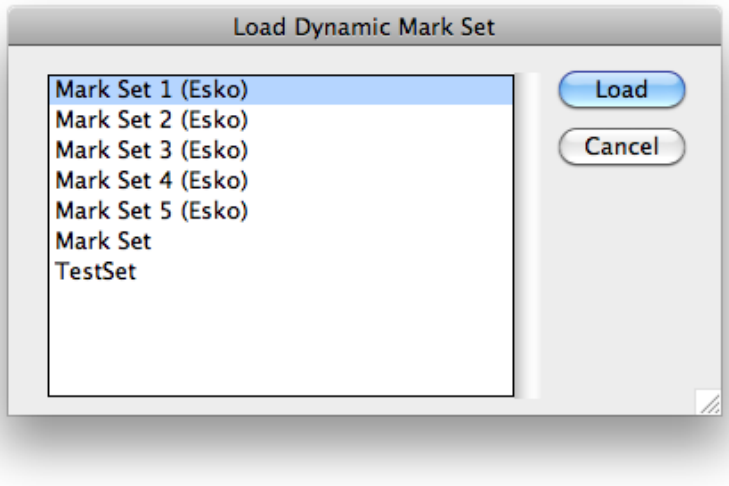
- Load a Mark Set
- Save the current Mark Set
- Delete the current Mark Set

- Manage Mark Sets

4.4.1. Load Mark Set

To load a Mark Set:

1. In the Fly-out menu of the Dynamic Marks palette, select **Load Mark Set**



The Load dialog will show the Esko Default Mark Sets, and Mark Sets saved at the location defined in the Dynamic Marks Preferences. See *Esko Mark Sets* on page 128 and *Dynamic Marks Preferences* on page 128

Note: Since Mark Sets are regular .ai documents, the list will show all Adobe Illustrator files at the defined location. When loading an Illustrator file that doesn't contain a Mark Set, nothing will happen.

2. Select a Mark Set from the list, and click **Load**.

Note: If the Mark Set contains a mark with the same name as a mark already in the Dynamic Marks palette, an error message will be given, and the Mark Set will not be loaded.

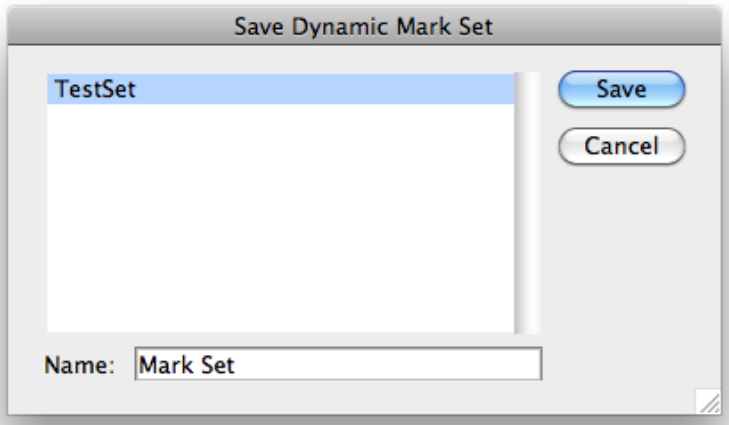
The marks from the loaded Mark Set are **added** in the Dynamic Marks palette. If you want to replace the current marks with the ones from the loaded Mark Set, you need to select all marks and delete them first.

If you load marks with dependencies, the mark will be attached to the object (e.g. PowerLayout Grid or Named Art) with the same name as in the Mark Set file. If no such object exists, you will get an error message and the mark will be attached to the Trim Box.

4.4.2. Save Mark Set

To save a Mark Set:

1. In the Fly-out menu of the Dynamic Marks palette, select **Save Mark Set**



The Save dialog will show the Mark Sets already saved at the location defined in the Dynamic Marks Preferences. See *Dynamic Marks Preferences* on page 128

2. Enter a name for the Mark Set and click **Save**. If a Mark Set with this name already exists, you will get the option to overwrite it.

Note:

You can only save a Mark set if the Illustrator file is saved. If not, you will be prompted to do so before saving the Mark Set

Mark Sets are saved as simple .ai documents, containing only the objects needed for the Mark Set.

Note: All Marks in a set need to have a unique name. If not, an error message is shown, and the Mark Set is not saved.

4.4.3. Delete Mark Set

To delete a Mark Set, select **Delete Mark Set** in the Fly-out menu of the Dynamic Marks palette.

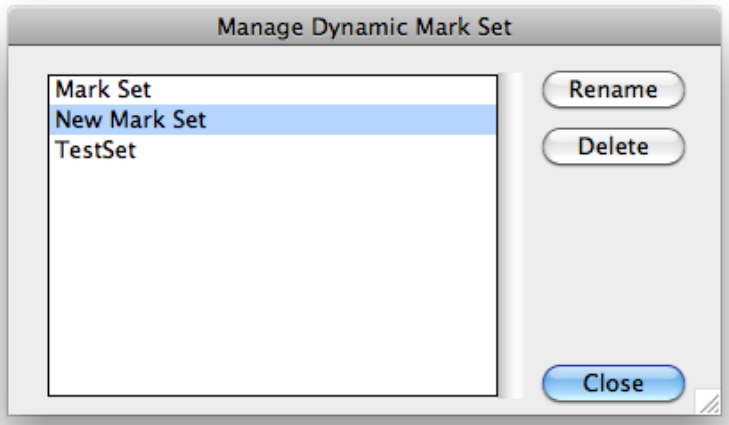
The Mark Set, including all dynamic marks will be removed from the file.

Note: This does not remove a saved (and loaded) Mark Set from disk. To do so, select **Manage Mark Sets** from the Fly-out menu. See *Manage Mark Sets* on page 126

4.4.4. Manage Mark Sets

To manage your Mark Sets:

1. In the Fly-out menu of the Dynamic Marks palette, select **Manage Mark Sets**



The Manage Dynamic Mark Set dialog will show the Mark Sets saved at the location defined in the Dynamic Marks Preferences. See *Dynamic Marks Preferences* on page 128

Note: Since Mark Sets are regular .ai documents, the list will show all Adobe Illustrator files at the defined location.

2. Select a Mark Set from the list, and
   - Click **Rename**, enter a new name for the Mark Set, and click **Rename** to change the name of the Mark Set
   - Click **Delete** to remove the Mark Set from the list. The actual Illustrator file will be deleted. This can not be undone.

4.4.5. Export Mark Sets

To use a mark set in the Dynamic task on an Automation Engine server, you can export your dynamic marks set as a **Dynamic Marks Set** (.dmk).

Note: Export Mark Set is only available when working in Normalized PDF. For more information on Normalized PDF vs PDF+ we refer to the Data Exchange documentation. See *https://www.esko.com/en/support/product?id=Esko%20Data%20Exchange%20for%20Adobe%20Illustrator*

To export your mark sets:

1. In the Fly-out menu of the Dynamic Marks palette, select **Export Mark Set for Server**
2. Select a file name and location for the Dynamic Marks Template.
3. Move the file to your DFE server at this location: `server\bg_data_marks_v010\DynamicMarks`

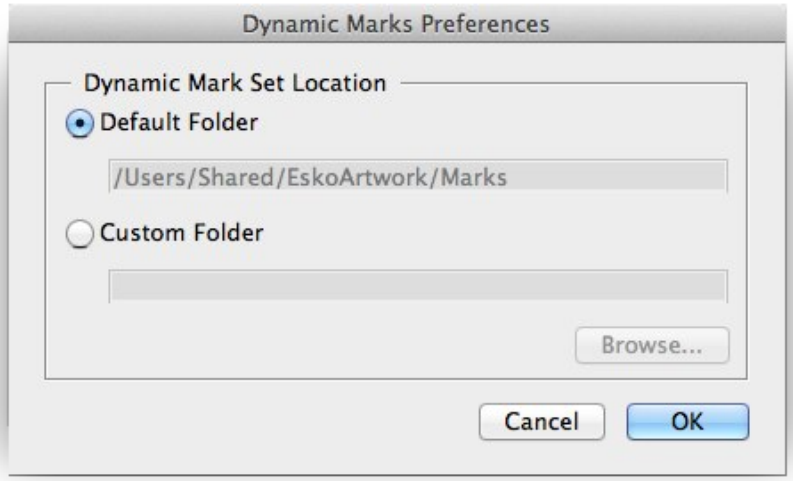
Limitations:

- Color Patch marks are not yet supported. As a workaround, you could manually create a custom mark that looks like the Color Patch.

Note: It is not possible to import a mark set back into Illustrator. It is highly recommended to keep the native Adobe Illustrator files for future modifications in the marks.

4.4.6. Dynamic Marks Preferences

You can open the Dynamic Marks Preferences by choosing **Illustrator** > **Preferences** > **Esko** > **Dynamic Marks Preferences** on Mac, or **Edit** > **Preferences** > **Esko** > **Dynamic Marks Preferences** on Windows.



In the Dynamic Marks Preferences, you can set the location to save and load Mark Sets.

- **Default Folder**: Mark Sets will be saved to and loaded from the default Esko location.
  - on Mac OS X: `/Users/Shared/EskoArtwork/DynamicMarks/`
  - on Windows Vista and 7: `x:\Users\Public\Documents\EskoArtwork\DynamicMarks\`
  - on Windows XP: `x:\Documents and Settings\All Users\Application Data \EskoArtwork\DynamicMarks\`
- **Custom Folder**: Mark Sets will be saved to and loaded from a custom folder which you can select by clicking the **Browse** button.

4.4.7. Esko Mark Sets

When installing Dynamic Marks, a number of default Mark Sets are installed as well. These sets can not be changed, but you can load one of these sets, change it and save it under a different name.

Here is an overview of these Mark Sets:

1 x KAMA

A Custom Mark, using these settings:

- The mark is a circle of 3.2 mm diameter, and a vertical and horizontal line of 6.5 mm. All lines are 0.15 mm thick.

- Attached to the Trim Box
- The center of the mark is vertically centered, and 12 mm to the right of the left border of the trim box.
- Using Darkest color

1 x Label Row

A Grid Mark, using these settings:

- attached to PowerLayout Grid 1
- on the right side, with a reference to the outer left cell
- using a 3mm offset in horizontal direction, 0mm in vertical direction
- repeat Every 1-up.
- symbol 10 x 5 mm in Registration color

1 x Sheet

A Custom Mark, using these settings:

- The mark is a rectangle of 10 by 5 mm.
- Attached to the Media Box
- A 3 mm horizontal offset to the upper right part of the Media Box
- using Registration color

2x Label Row

Two Grid Marks, using these settings:

- attached to PowerLayout Grid 1
- Right mark is on the right side, Left mark is on the left side, both with a reference to the outer left cell
- Right mark is aligned to the right bottom corner, Left mark to the upper left corner
- using a 3mm offset in horizontal direction, 0mm in vertical direction
- repeat Every 1-up.
- symbol 5 x 5 mm in Registration color

Mark Set 1 (Esko)

A set for maximum 6 inks in the document, units: mm

- 1 Registration Mark placed on every side
- a Text Mark with the name of the document
- a Text Mark with the date
- a Gradation Strip on the left, with 1 rectangle per ink, colored in 100%
- a Gradation Strip on the right, with a 40%, 80% and 100% rectangle for every ink.
- 6 Text Marks, one per ink, with the name of the ink, and colored in 100% of the ink.

Mark Set 2 (Esko)

A set for maximum 6 inks in the document, units: mm

same as Mark Set 1, but with different type of Registration Mark

Mark Set 3 (Esko)

A set for maximum 4 inks in the document, units: mm

- 12 Gallus elements on left and right side of the document

Mark Set 4 (Esko)

A set for maximum 6 inks in the document, units: mm

- Bearer Bars in vertical orientation and attached to the Trim Box
- 6 Text Marks, one per ink, with the name of the ink, placed inside the Bearer Bar, and colored with 0,2% tint to knock out the Bearer Bar in the same separation

Mark Set 5 (Esko)

A set for maximum 12 inks in the document, units: mm

- Bearer Bars in vertical orientation and attached to the Trim Box
- a Gradation Strip on the left, with one circle per ink, colored in 100%.
- a Gradation Strip on the right, with one circle per ink, colored in 50%.
- Registration Marks placed on the left and right side.
- 12 Gallus elements on left and right side of the document
- a Text Mark with the name of the document, colored in registration
- a Custom Mark setting a background for the above mentioned Text Mark
- 12 Text Marks, one per ink, with the name of the ink, and colored in 100% of the ink.
- a Custom Mark setting a background for the above mentioned Text Marks
- 12 Text Marks, one per ink, with the current Angle of the ink, and colored in 100% of the ink.
- 12 Text Marks, one per ink, with the current Ruling of the ink, and colored in 100% of the ink.
- a Text Mark with the date and time
- a Text Mark with the name of the author, based on the XMP info

4.5. Dynamic Marks Layer

When adding a dynamic mark for the first time to a document, a layer named "Dynamic Marks" will be created. Standard Marks are created in the Dynamic Marks layer, Custom Marks are moved to the Dynamic Marks layer. If you rename the Dynamic Marks Layer, all dynamic marks created later will still be created in or moved to this layer already containing dynamic marks.

Loading a Mark Set

If you load a Mark Set, the dynamic marks in the set will be placed in the same layer as saved in the set. This means you can have two different layers containing dynamic marks at that point. Newly created marks will then be placed in one of those layers.

Locking or hiding the Dynamic Marks Layer

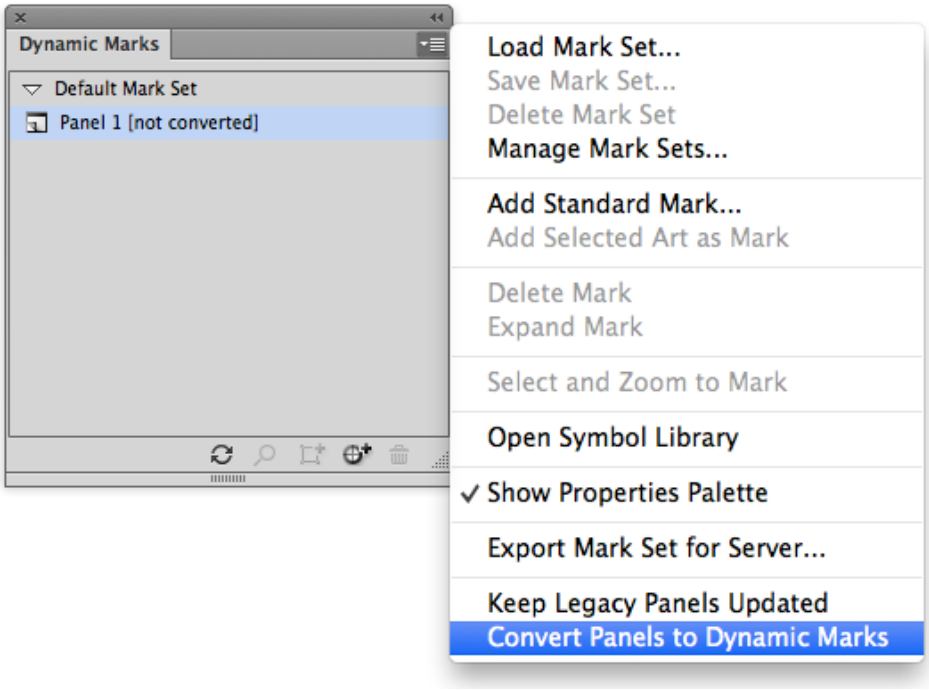
If the Dynamic Marks layer is locked, you will not be able to add any mark. A message will be shown in the message palette. However, all indirect operations are possible, for example changes in the Ink Manager will change the gradation strip, even if the Dynamic Marks Layer is locked.

If the Dynamic Marks layer is invisible, marks will be created / moved in the Dynamic Marks layer, and will immediately turn invisible.

4.6. Dynamic Panels in Dynamic Marks

When opening a document containing a **Dynamic Panel**, you will see those dynamic panels in the Dynamic Marks palette.

By selecting a dynamic info panel and choosing **Convert Panels to Dynamic Marks** from the fly-out menu, you can convert the selected dynamic panel into one or more dynamic marks.



- Every text item in the dynamic panel is converted to a separate dynamic text mark, using the same variables.
- If possible, other panel items with the same color attribute will be grouped and combined in one single mark.
- The inks used in the dynamic panel are replaced by the corresponding dynamic mark color:
  - A dynamic panel ink will become dynamic color with mode "Only Printing Inks"
  - A dynamic panel technical ink becomes dynamic color with mode "Only Technical Inks"
  - Darkest ink becomes darkest color
  - An object using registration swatch becomes registration color
  - Other inks (not dynamic) become a static color.
- The position of converted panels will always be defined relative to the top left corner of the trim box
- Panel items that can't be converted into a dynamic mark (e.g. a linked image) will remain as a panel item, while other items are converted. A message will be shown.

4.7. Tips and tricks

I open a new document, create an object to be used as a mark, and as soon as I use "Add Selected Art as Mark", the color of the object changes or disappears. Why ?

If you have a document with e.g. only one rectangle, colored with 100% cyan in your document, the Ink Manager will only contain one ink (Cyan).

When you create a custom mark, the default color attribute is "Dynamic". At this moment, the color definition of the mark becomes "100% of the first ink in the ink manager". Because Ink Manager doesn't read inks from marks with color attribute "Registration", "Darkest" or "Dynamic", and because there are no other objects in the document, the inks list in the Ink Manager will be empty, and so will the custom mark be.

As soon as another ink is used in the document, this ink will be the first ink in Ink Manager, and will be used by the Custom Mark.

In the same way, if the original document would contain e.g. one object in cyan and one in magenta (and nothing else), creating a Custom Mark from the cyan object would make magenta the first ink in the ink manager, so the mark would change from cyan to magenta.

Can I start from an existing standard mark to create my own mark symbols ?

Yes, you can, as long as you remember to **expand** the mark / symbol first (i.e. making it a regular object instead of a symbol).

What if I delete a symbol in the DynamicMarks(_CS6).ai file ?

If you delete a symbol in the DynamicMarks.ai file, the symbol will obviously no longer be available in the **Set Symbol** list. If you delete the default symbol for a Standard Mark, creating the corresponding Standard Mark will result in an error message. To fix this, you have to create these symbols again manually.

Existing marks will NOT be affected, since the symbol is internally copied in the file when creating the mark, or when setting a different symbol. This also means that you can open a file with marks using custom symbols (saved in your local DynamicMarks.ai file) on another computer without loosing the marks.

5. PDF Import

5.1. The PDF Import plug-in

The **PDF Import** plug-in allows opening Esko PDF files in Adobe Illustrator. Almost every PDF object or construction that can be present in an Esko PDF is supported, and non-native art (also known as foreign art) is created only for free-form gradients and very complex meshes..

In addition to the artwork content, various high-level information or **metadata** is preserved.

It also improves speed and memory allocation of Adobe Illustrator when a single raster file is linked multiple times into the Illustrator document,even when PDF Import is not directly used to import the document.

Errors and warnings generated during the import are logged to the **Messages** palette.

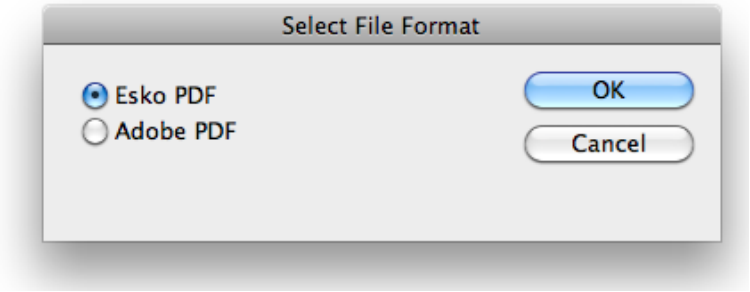
Known limitations:

Gradients of type Conical, Rectangle and Parallellogramic created by PackEdge cannot be imported in Adobe Illustrator, because Adobe Illustrator doesn't support those types of gradients

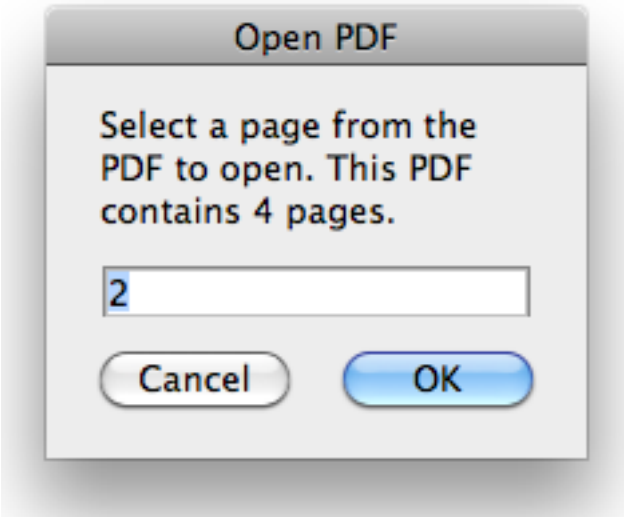
5.2. Opening a PDF file

The behavior of the PDF Import plug-in and Illustrator depends on the type of file being opened:

- `.inpdf` : When the file being opened has the suffix .inpdf, it is automatically opened by PDF Import.
- `.pdf` with Illustrator data: When the file being opened is an Adobe PDF with preserved Illustrator editability, it is opened as Illustrator document.
- Regular `.pdf` : For all other PDF files, the following dialog is shown. PDF Import is used when the first option (Esko PDF) is chosen. Adobe Illustrator shows this dialog automatically when multiple file import filters support the file being opened.



When the PDF file has multiple pages, a dialog will pop up, allowing you to specify the page you want to import



If you enter a page number that is not in the PDF file, the nearest possible page number will be taken.

5.3. High-level information preserved by PDF Import

5.3.1. Layers

All Layer names are preserved, as well as the locked status and the printability flag.

Note:

The Normalized PDF format does not support the hidden/visible flag, therefore all layers (and artwork) present in the PDF file are imported as visible.

5.3.2. Named objects

For named objects, the names of the artwork are preserved.

5.3.3. Inks

Esko screenings, ink types, ink books, ink order and Printing Method as shown in the Ink Manager are preserved.

5.3.4. Object based screening

Object based Esko screening is preserved and shown in the InkManager. The Screening plug-in is not needed for this functionality.

5.3.5. Structural Design (CAD) data

The original structural design file is reimported using the Structural Design plug-in that is part of **Esko Data Exchange** .

The original placement origin, rotation angle, front/back side, and printable part selection are preserved. When the structural design file cannot be found, the user is asked to browse for it. When it still can't be found or importing fails, the original Structural Design layer is imported in expanded state and the link to the external file is lost.

5.3.6. Page boxes

All page boxes (Media Box, Trim Box, Crop Box, Art Box and Bleed Box) are imported and shown by the Trim Box and Media Box plug-in.

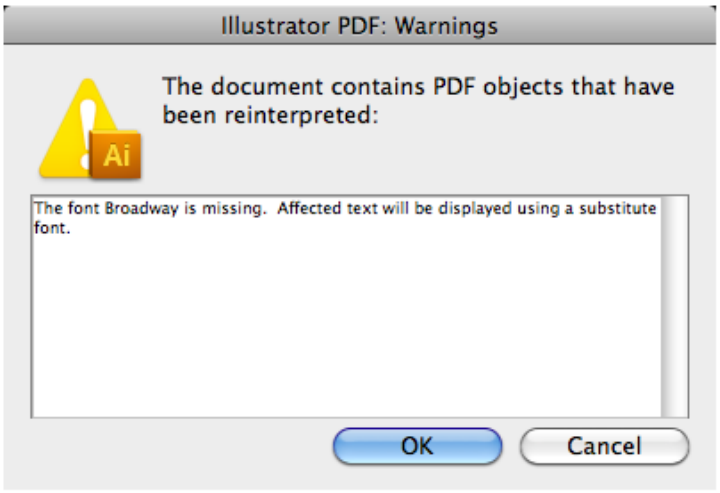
5.3.7. Text and fonts

When importing a PDF+, text box and paragraph parameters are retrieved from the PDF+ metadata, and will be preserved.

When importing a Normalized PDF, PDF Import will try to reassemble text objects into paragraph and restore high-level typesetting information, so that you can edit these text objects as native text in Adobe Illustrator. If this reassembly doesn't work, it may happen that text is split into several

text objects, where each object has a constant font style. In very rare circumstances, when it is not possible to determine the encoding, the text is contourized.

Any font available to Illustrator can be used without any limitations. When a font not available to Illustrator is used, a substitution is used. However, the original font name is preserved in the Illustrator document. Illustrator gives the following warning in such cases:



When such a document is saved and reopened on a system with the font installed, it will be correctly rendered without any warning.

5.3.8. Linework with mixed (DeviceN) colors

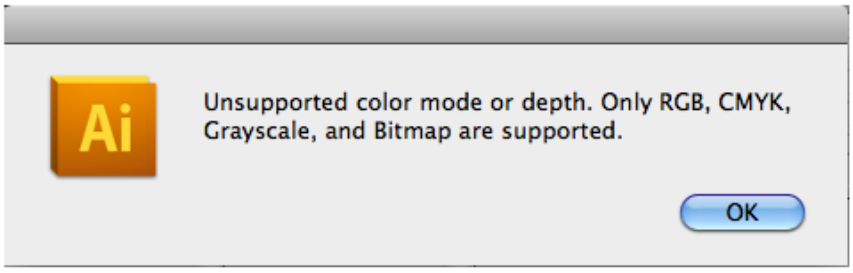
Adobe Illustrator does not support mixing multiple inks (combinations of multiple spot inks or process inks and a spot ink) in a single fill or stroke. Instead, they are simulated by multiple fills resp. strokes visible in the Appearance palette.

When PDF Import encounters a path object with a DeviceN fill or stroke, it is imported as multiple appearances with additional fills resp. strokes put into overprint. Such appearances are supported by boostX Ink Mix which can work with them further. However, the Ink Mix plug-in is not needed for this functionality of PDF Import.

5.3.9. Linked images

PDF Import supports links to external images. The links are preserved.

Some file formats for external images are supported in a (Normalized) PDF, but are not supported by Adobe Illustrator. For example multichannel PSD files can be placed in PackEdge or ArtPro, but it is not possible to open such Normalized PDF using this plugin because Adobe Illustrator does not support this variant of PSD. A workaround is to embed the PSD in PackEdge or ArtPro first. The following error is shown by Adobe Illustrator in such cases:



The **Image Extractor** plug-in is used for linked Esko CT/LP files. This is a free (non-licensed) functionality of Image Extractor.

Linked files with remapped inks are imported as Channel Mapped images. The visual representation will be correct, however a valid license for the Channel Mapping plug-in is needed to edit the channel mapping.

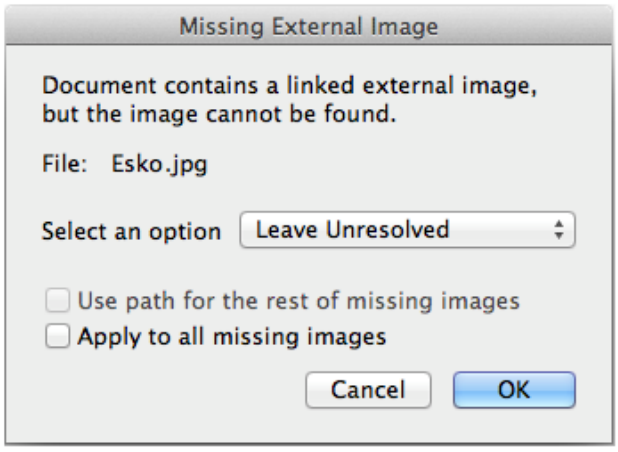
Adobe Illustrator has performance problems when a single document contains many linked rasters, or few linked files are referenced many times. It may sometimes cause that only Outline preview can be used. The PDF Import plug-in improves the handling of such documents.

Note:

This optimization works also for non-Normalized PDF files, including native Adobe Illustrator documents, but only as long as the PDF Import is installed.

Missing images

It sometimes happens that the referenced file is not found. Then the following dialog pops up:



There are 3 options:

- **Leave Unresolved** : Only a single-pixel placeholder is embedded.

  The link to the original file is lost. The **Links** palette can be used to relink to the original file when it becomes available (or to any other file).

- **Use Embedded** : The image preview embedded in the PDF is used. Normalized PDF often contains a preview with a low resolution (up to 72 dpi). However, often there is just a single-pixel placeholder.

  The link to the original file is lost. The **Links** palette can be used to relink to the original file when it becomes available (or to any other file).

- **Relink** : the standard file dialog opens, asking the user to find the missing linked file. When this option is selected, the **Use path for the rest of missing images** option becomes enabled.

5.3.10. Dynamic Barcodes

Barcodes in Normalized PDF, created by PackEdge or an Automation Engine server task, are preserved and recognised as barcode objects. If the Dynamic Barcode plug-in is installed and licensed, it allows user to modify parameters of the barcodes supported by the Dynamic Barcode plugin.

As from version 16, also live Bar Codes created by ArtPro+, saved in PDF+ format, will be imported.

5.3.11. Notes

Notes written by PackEdge, Plato or using the Notes plug-in in Adobe Illustrator, will be imported.

For more information on working with notes, see *Working with Notes* on page 138

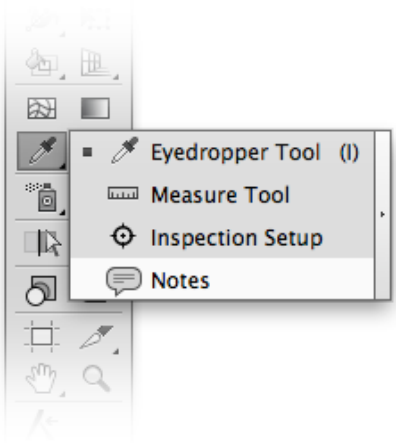
5.3.12. Inspection Points

Inspection Points and Inspection Boxes written by PackEdge, Plato or the Inspection Setup Plug-in in Adobe Illustrator, will be imported.

For more information we refer to the **Inspection Setup Plug-in** documentation, which is part of the Esko Data Exchange documentation. See *https://www.esko.com/en/Support/Product?id=Esko%20Data%20Exchange%20for%20Adobe%20Illustrator*

5.4. Working with Notes

Using the Notes tool, you can add and edit notes in your document.



Importing and saving notes

Notes are saved in the Normalized PDF file as regular PDF Comments, and will show up as "Sticky notes" in Adobe Acrobat. Sticky notes created in Acrobat will also show up in Adobe Illustrator, while other types of comments (text corrections, highlights, ...), and note properties or statusses are disregarded when opening a PDF file in Adobe Illustrator.

When importing a Normalized PDF containing notes created in ArtPro, PackEdge, Plato or DeskPack, these notes will also show up in Adobe Illustrator.

Notes in Adobe Illustrator

When selecting the **Notes** tool from the toolbox, all Notes become visible in the document.

A note consists of two parts: the **Note** itself, the yellow balloon indicating the location of the note, and the **Note Pop-up**, containing text, the name of the user that created it, and the time of creation.

When hovering over a note, the Note Pop-up is temporarily shown. When clicking the note, the Note Pop-up is opened, and you can edit its content. It will stay open until you close it using the **X** button.

Adding and editing notes

- To create a note, select the **Note tool** and click in your document.
- To move a note, click and drag the note.
- Select another tool to hide all notes and note pop-ups. Selecting the Note tool will make all notes visible again. The note pop-ups that were open before will be reopened.
- To delete a note, hover over the note, and click the red cross.
- To hide a note pop-up, click the X in the top right corner. This doesn't affect the note itself, it only hides the pop-up

6. PowerLayout Standalone

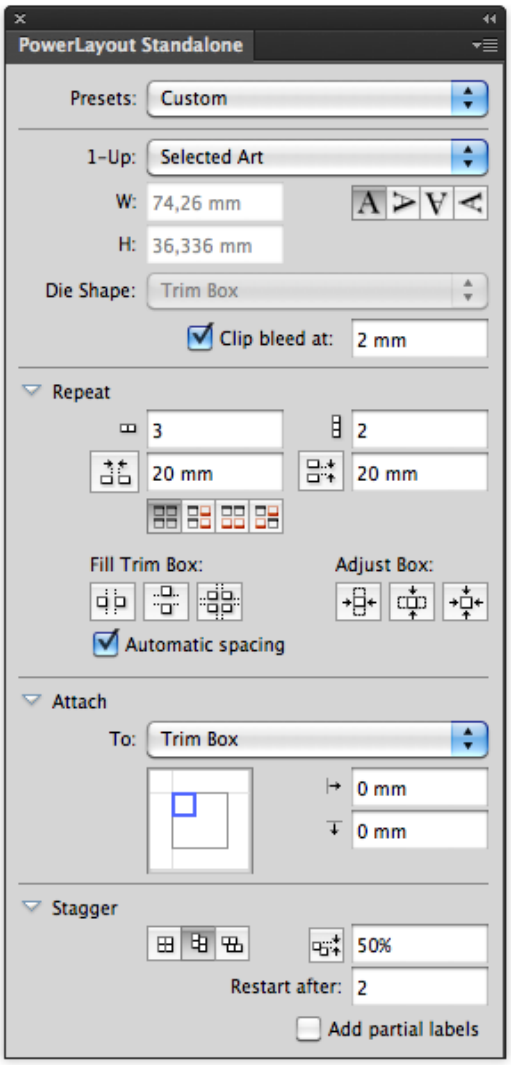
6.1. Introduction

PowerLayout Standalone for Adobe Illustrator is a complete label step & repeat solution. It allows you to create a step and repeat of selected artwork or an external file into a "Repetition". Combining a Repetition with marks, you can create a plate design in any flavor of the available output formats. By combining multiple Repetitions, you can create a Step and Repeat of multiple labels or jobs.

6.1.1. Creating a first repetition

To create a first repetition:

1. Choose **Window** > **Esko** > **PowerLayout Standalone** to open the PowerLayout Standalone palette.



2. Set up the **one-up**:
   a) If you choose **Select Document**, a file browser will allow to select an Adobe Illustrator file or a Normalized PDF file. The file will be opened and will be used as one-up for the Repetition.
   b) If you choose **Selected Art**, the currently selected objects will be used as one-up for the Repetition.
   c) Define the initial orientation and the bleed for the one-ups.

   See *The one-up* on page 144
3. Set up the **Repeat** by entering the number of repeats vertical and horizontal, the gap or the step distance, and the head turn. See *The Repeat* on page 146
4. Define the position of the Repetition, by selecting the **Attach to** object, positioning the Repetition based on the Attach to object, and entering the offset. See *Position the Repetition* on page 148

   Note: If the open document doesn't contain a trim box, the plug-in will automatically create a trim box on the document's art board.
5. Set the **Stagger**. See *Stagger* on page 149

As soon as you select a one-up, whether it is an external document or selected art, a Repetition is generated, based on the actual settings.

By deselecting the first Repetition, you can create another Repetition in the same document, to create a Step and Repeat plate containing different labels.

If a Repetition is selected, the PowerLayout Standalone palette will show the settings for this Repetition. Changing any of the settings will immediately change the Repetition accordingly.

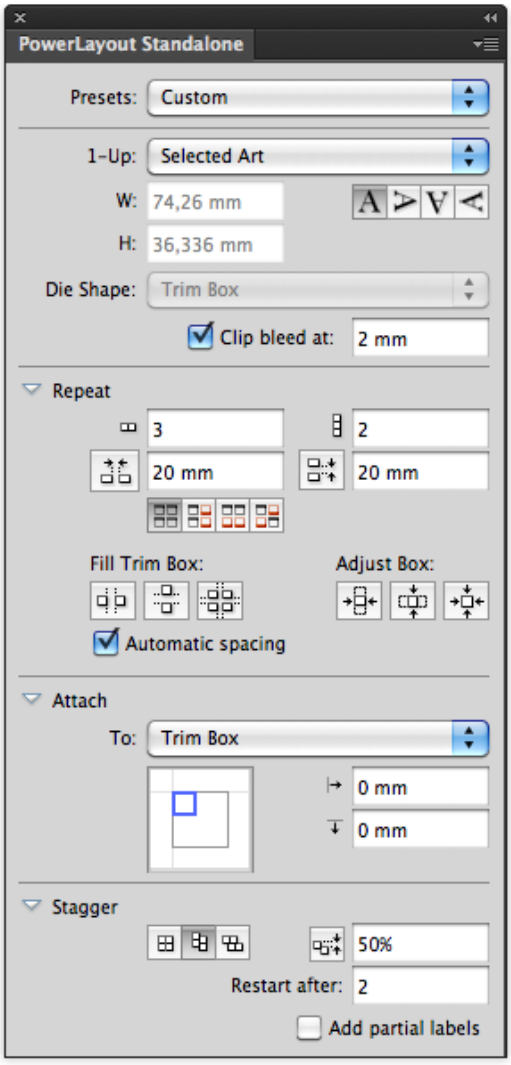
A Repetition is created in the PowerLayout layer. If the layer doesn't exist yet, it will be created.

6.2. The PowerLayout Standalone palette

To open the PowerLayout Standalone palette, choose **Window** > **Esko** > **PowerLayout Standalone** .

The PowerLayout Standalone palette will show the settings of the currently selected Repetition. To create a new Repetition, make sure no Repetition is selected.

You can use **Reset Parameters** from the fly-out menu to reset all parameters to their default values.



6.2.1. The one-up

For one-up, you can

- choose **Selected Art**. The currently selected objects will be used as one-up for the Repetition, in the same document.
- choose **Select Document**, a file browser will allow to select an external file. If you have connection to an Automation Engine set up using the Server Connection Assistant, you can open an external one-up directly from a Job folder. You can select any Adobe Illustrator file or a Normalized PDF file. The file will be opened and will be linked as one-up for the Repetition. See *Working with external files* on page 144

Underneath, the **Dimension** of the currently selected one-up is shown. For selected art, this is the size of the bounding box of the selection. For external files, this is the size of the trim box. If the file doesn't contain a trim box, the size of the complete artwork is shown. The dimensions are used for positioning the Repetition elements.

defines the initial **Orientation** of the one-ups in this grid. Their orientation within the layout can be changed further by the option **Head Turn**.

In case you're working with an external file as one-up, you can step labels based on the **Die Shape** instead of the Trim box, so that you can nest them closer together. You define the die shape by selecting the **Die Separation** from the drop-down containing all separations in the one-up. The die shape defined in the die separation will be used for repeating the label, and for bleed clipping. If the selected die separation doesn't contain a useable die shape, you will get an error message.

'**Clip Bleed**' creates a clipping mask around the one-up, to clip any bleed to the desired distance.

Read more about bleed in *Working with bleed* on page 153.

Working with external files

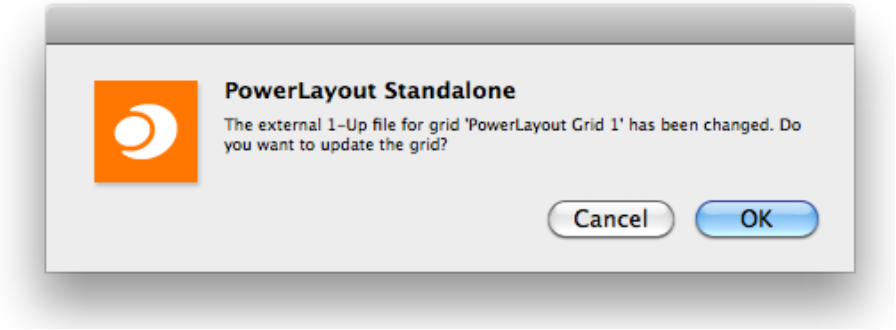
When creating a Step and Repeat using an external file, PowerLayout Standalone keeps the link to the external file.

Open one-up

If a PowerLayout grid of an external file is selected, you can choose **Open one-up** from the fly-out menu. This will open the external file in Adobe Illustrator.

Update the Repetition if the one-up is modified

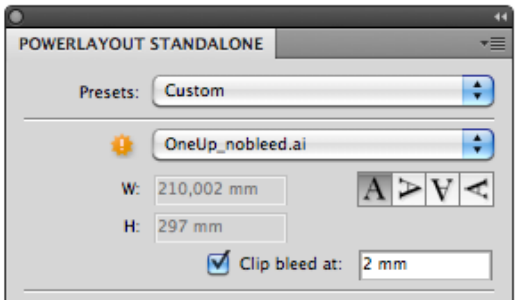
If the plug-in detects the change of the external one-up, you will get a message.



If you click **OK**, the Repetition will be updated, using the modified one-up file.

If you click **Cancel**, the PowerLayout Standalone palette will show a yellow exclamation mark next to the one-up name, indicating your Repetition is not up to date.

Note: Even if the Repetition is not up to date, you can still use (and output) your file, using the previous version of the one-up.

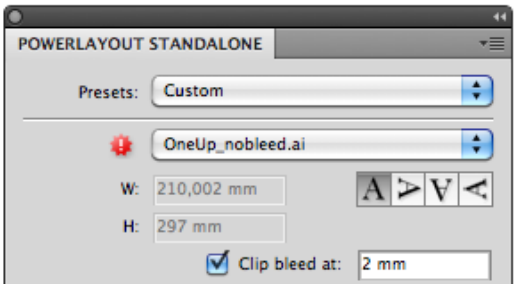


You can update the Repetition later by choosing **Update All External one-ups** from the fly-out menu of the PowerLayout Standalone palette, if the Repetition is selected.

Note: PowerLayout Standalone periodically checks if the one-up has been changed. If you changed the one-up and don't want to wait for the plug-in to give you a message, you can immediately use **Update All External one-ups**

Re-linking, e.g. for missing one-ups

If the external file is missing, the PowerLayout Standalone palette will show a red exclamation mark next to the one-up name.



In that case, or if you want to use a different one-up file, you can relink to another external file. To do so, choose **Select Document** from the one-up dropdown menu, and browse to the (new) external file. The plug-in will keep the current settings, and change the Repetition using the new one-up.

Note: When updating or re-linking the one-ups, the Repetition is modified, even if the PowerLayout layer is locked.

Linked images in external one-ups

If an external one-up contains linked (and not embedded) images, these images will be linked in the Repetition as well. You will need those external images e.g. to generate PDF from the file containing the Repetition.

Using linked images in a one-up has the advantage that image optimizing is used in PDF Export. This means that the linked image is only placed once in the PDF, and not placed once for every occurrence in the Repetition.

Ink order & screening

The ink order of the external one-up will be kept when creating a grid. Also the object based screening (i.e. exceptional ink settings) will be kept.

Note: In some very specific cases, screening info will be lost, e.g. for linked images that have dropshadow effect, or multiple appearance objects.

6.2.2. The Repeat

The **Repeat** section of the PowerLayout Standalone palette allows to set up the repetition parameters of the one-up for the selected Repetition

- You can define the number of horizontal and vertical repeats
- By clicking one of the **distance** buttons, you can switch between defining the **gap** distance horizontal or vertical , and defining the **step** distance horizontal or vertical .
  - Setting the **gap** means defining the distance between the right (or bottom) side of the previous step, and the left (or top) side of the next step. The step distance will be the (vertical or horizontal) size of the one-up, plus the size of the (vertical or horizontal) gap.
  - Setting the **step** means defining the distance between the left (or top) side of the previous step, and the left (or top) side of the next step. When setting the step distance, the size of the one-up is not taken into account.
- Define the Head Turn . You can choose between
  - No Head Turn

- Head Turn on column

- Head Turn on row

- Head Turn on row and column

- If you click one of the **Fill Trim Box** buttons , with the **Automatic Spacing** option enabled (default), the number of repeats will be adjusted to fit as much one-ups as possible on the trim box of the open document, in vertical direction, horizontal direction or both. The one-ups are

distributed and the gap distance is calculated so that the distance between the Repetition and the top and bottom / left and right of the trim box of the document is half the gap distance

- If you click one of the **Fill Trim Box** buttons, with the **Automatic Spacing** option disabled, the number of repeats will be adjusted to fit as much one-ups as possible on the trim box of the open document, in vertical direction, horizontal direction or both. The repeat will be using the defined Gap Distance, and the repeat is placed at half the Gap Distance of the top left corner of the trim box.
- By clicking one of the **Adjust box** buttons , you can do the opposite: change the size of the trim box (and the media box) to the currently selected repeat, either vertically, horizontally or both.
  - **Adjust Box** can only be used if one single grid is selected. If multiple grids are selected, the buton is disabled.
  - **Adjust Box** changes the size of the Trim Box (and the Media Box). To avoid unexpected results, the button will be disabled if the position of any other object (a Mark, a Grid, ...) is depending on the Trim Box, using the **Attach To** options. Another page box (e.g. Media Box or Bleed Box) that is attached to the Trim Box, is not taken into account.
  - After **Adjust Box**, the repeat grid will be positioned so that there is a gap of half the normal **Gap** distance between the edge of the repeat (top/bottom for vertical adjust, left/right for horizontal adjust), and the adjusted Page Box.

6.2.3. Position the Repetition

The position of a Repetition is based on 3 settings:

Attach to

The position of the Repetition can be based on

- the Art Box
- the Bleed Box
- the Crop Box
- the Media Box
- the Trim Box
- another PowerLayout Repetition, such as "PowerLayout Grid 1"
- a Dynamic Mark
- Named Art

Named Art is any art in your Illustrator document, that you gave a name in the Layers palette: browse to the object you want to name in the Layers palette, double click the default name (eg. <path>) and enter a name.

When selecting **Named Art...**, you get a separate dialog, in which you can either type the name of the Named Art you want to use, or select it from the drop-down at the right. Once Named Art has been used, it remains available in the **Attach To** drop-down.

Named Art is only possible on objects, not on groups. Named Art can't be hidden or locked.

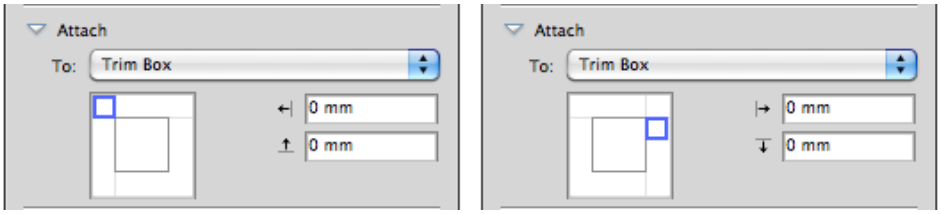
Positioning

The way the Repetition is attached, can be chosen by clicking and dragging the blue square (representing the Repetition) to the desired position on the grey square (representing the **Attach To** reference). Each square has 9 reference points (top left center and right, middle left center and right, and bottom left center and right), so you have 81 different ways of positioning the Repetition.

In below example, the top center of the (bounding box of the) Repetition will be placed on the left bottom corner of the (bounding box) of the reference defined in the 'Attach to' field.

Offset

In the offset fields, you can move the Repetition based on the defined position. The direction of the offset (up, down, left or right) depends on the positioning, and is shown by the arrows.



Preserve Initial Position

The **Preserve Initial Position** option can be found in the flyout menu of the PowerLayout palette, and only applies to repeating selected art, not when repeating external files. If enabled, the position of the original object(s) is kept, and this initial object will be the top left cell in the repeat.

This will automatically change the **Attach** section: the **Positioning** is set to top left, and the **Offset** is adjusted to match the position of this original object.

Note: Preserve Initial Position is not included when saving a preset. Loading a preset will disable the option again, and so does selecting **Reset Parameters to Default** from the flyout menu.

6.2.4. Stagger

Staggering allows to shift the 2nd, 3rd, ... row or column down or to the right.

:

Select the **Direction** in which you want to stagger the one-ups. From left to right, the choices are: No Stagger, Stagger Columns, and Stagger Rows.

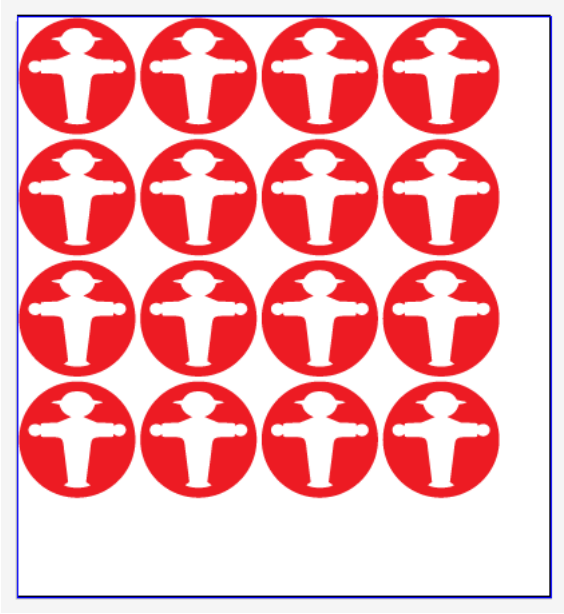
Next to the **Stagger Distance** button , you can define the distance for staggering. By clicking the Stagger Distance button you can switch between entering the distance as a fixed value in the current units, or as a percentage of the one-up size.

The stagger will be repeated for a number of rows or columns as defined in **Restart after n columns/ rows**. After that, the next one-up will be at the begin position again.

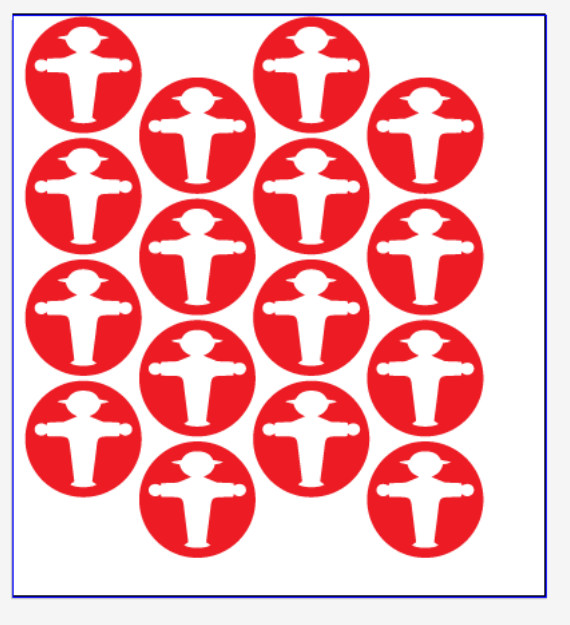
If **Add partial labels** is enabled, the gaps created by staggering will be filled with partial labels (print items).

Examples:

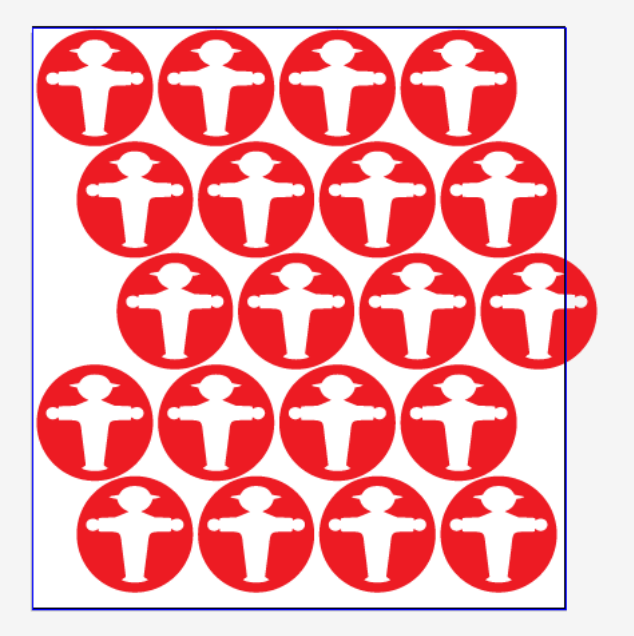
No stagger:



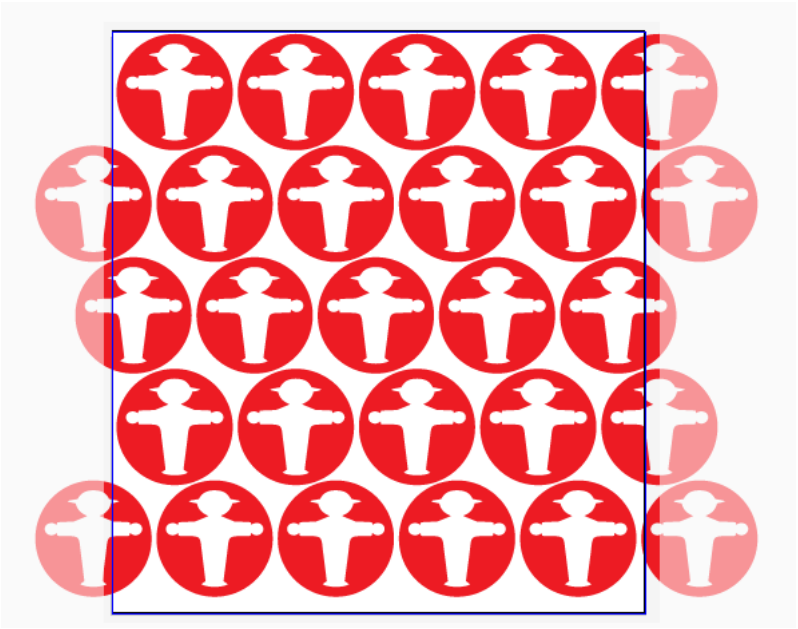
Stagger Vertical, 50% distance, using a negative horizontal gap, Repeat After 2 columns:



Stagger Horizontal, fixed distance, using a negative vertical gap, Repeat after 3 rows:



Same as above, with **Add partial labels** enabled:



6.2.5. PowerLayout Standalone Presets

With PowerLayout Standalone Presets, you can save all your settings as a preset to be able to reuse them on other documents.

1. Define your settings in the **PowerLayout Standalone** dialog.
2. In the **Presets** list, choose **Save...**
3. Give your preset a name and click **OK**.

   You can now see your preset in the **Presets** list. To reuse it in the future, just select it in the list.

- To delete a preset, select it in the **Presets** list then select **Remove**.
- To edit a preset, select it in the **Presets** list, make your changes in the settings, then save it again with the same name.
- To reset the PowerLayout Standalone parameters to default, choose **Default** from the Presets list.
- The location where the Presets are saved, is set in **Illustrator** > **Preferences** > **Esko** > **PowerLayout Standalone Preferences ...**.

  When choosing **Use default preference folder**, Presets are saved in the default "shared users" folder:

When choosing **Use custom folder**, Presets are saved in the folder you define by clicking the **Browse** button.

6.2.6. Export Template

This option can only be used in combination with a DFE Server.

6.2.7. Importing PowerLayout Client files

You can import an xml coming from PowerLayout by selecting **Import PowerLayout Client Template** from the fly-out menu. This will open a browse window, where you can select the XML file.

To select more than one file or a whole folder, you can use **PowerLayout Client Import Assistant...**

Importing PowerLayout Client files will create a new AI document, with the same name as the xml file. It will contain a PowerLayout Standalone repetition based on "selected art". You can use the drop down to relink to any external one-up, or export as a template and use it on a server later on.

The Repeat will use the following parameters from the XML file:

- **Sheet** and **Plate** measurements
- the **size** of the one-up
- the **Repetition**
- the **Rotation**
- the **Gap**
- the **Alternate**
- the **Bleed**
- what is **attached** to which object.

The VDP part from a PowerLayout Client XML is not supported. Neither are Task Type, Ticket Name, Single-Curve DGC, Automatic DGC and Include CAD info for Digital Flexo Suite.

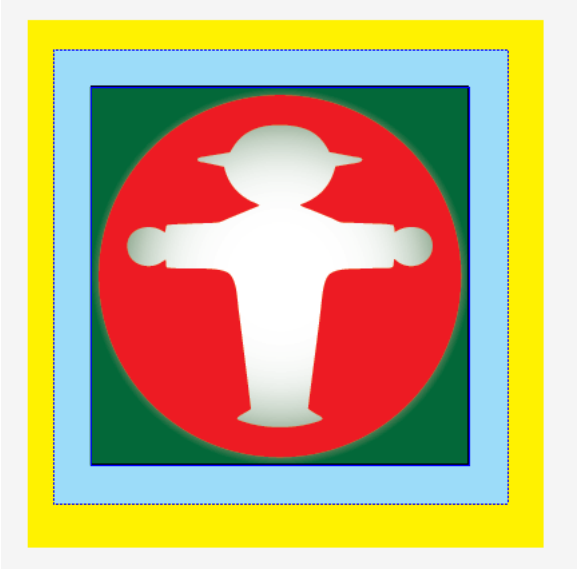
If **SmartMarks** are attached to the imported xml, a dialog will pop up, stating the name of the used Mark set. A list of available Dynamic Mark Sets is shown, allowing to select a Dynamic Mark Set as a replacement for the SmartMarks. If you click **Cancel**, it will cancel only the operation of attaching Dynamic Mark Set, but the whole import process will continue to the end.

6.3. Working with bleed

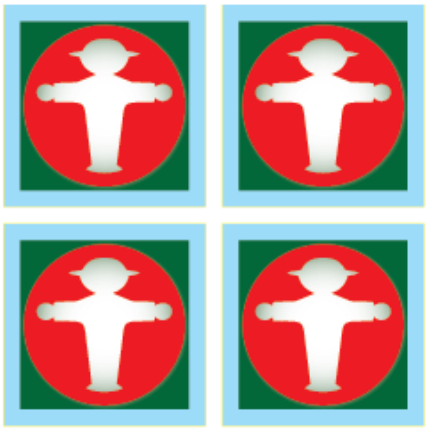
When using an external file as one-up, the available "bleed" is the artwork between the TrimBox and the MediaBox. Information outside the MediaBox is never used.

Note: If a Die Shape is defined, the true shape of the Die is used instead of the TrimBox.

In this example one-up, the yellow is outside the MediaBox (and will not be used in the Repetition), the blue is between MediaBox and TrimBox (and thus "bleed"), and the green is inside the TrimBox.



The example underneath shows a Repetition of this file, with a big step distance, and no Clip Bleed. As you can see, the bleed is limited to the MediaBox (no yellow is shown).

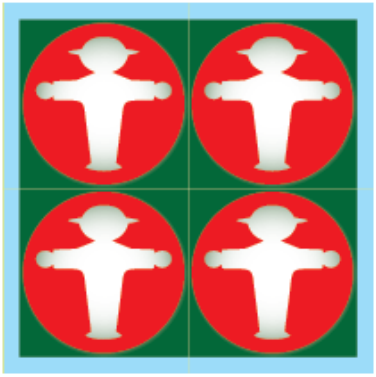


If you would repeat the same file, using the (TrimBox) size of the one-up as step distance (i.e. set the gap distance to zero), the bleed of the topmost one-up would overlap the underlying one-ups, as shown in this example.

To avoid this, the **Clip bleed at** option can be used. When enabled, a clipping mask is applied around the one-up, based on the TrimBox, using a centerline algorithm. A distance can be entered to offset the clipping mask from the TrimBox, either positive (to the outside) or negative (to the inside). If two one-ups (or their bleed) would overlap (i.e. if the size of the TrimBox + the "Clip Bleed at" distance is larger than the step distance), the clipping mask of both will be restricted to half way the overlap, so the clipping masks don't overlap.

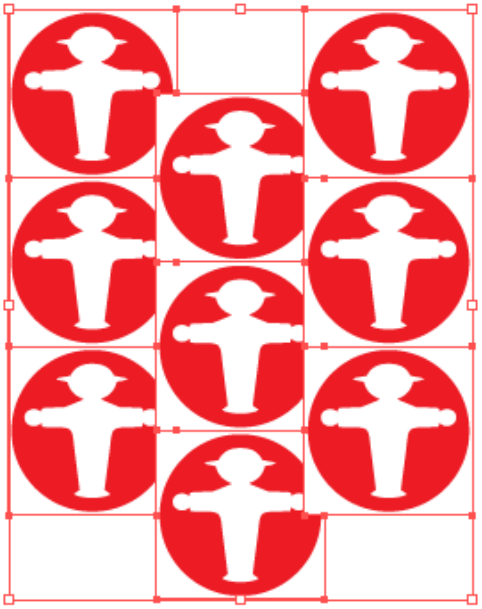
Below the same example Repetition as above (no gap), with **Clip Bleed at** enabled and set to 0mm.

If **Clip Bleed at** is set at a positive value, bleed will become visible on the outside of the Repetition.



If the step distance is increased (or a gap distance is entered), bleed is added in between the labels, and divided equally over the two adjacent one-ups.

In some cases, using the **Clip Bleed at** option will give undesired results. In the example underneath you see a Repetition with Staggering, using a negative horizontal gap. If the **Clip Bleed at** option is enabled, parts of the labels are clipped off.



If **Clip Bleed at** is disabled, you get the result shown below:

Note: When selected art is used as one-up, the bounding box of the selected objects is used as base for the clipping mask.

7. Seamless Repeat

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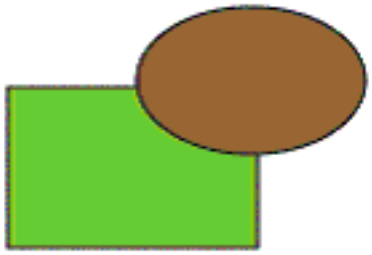
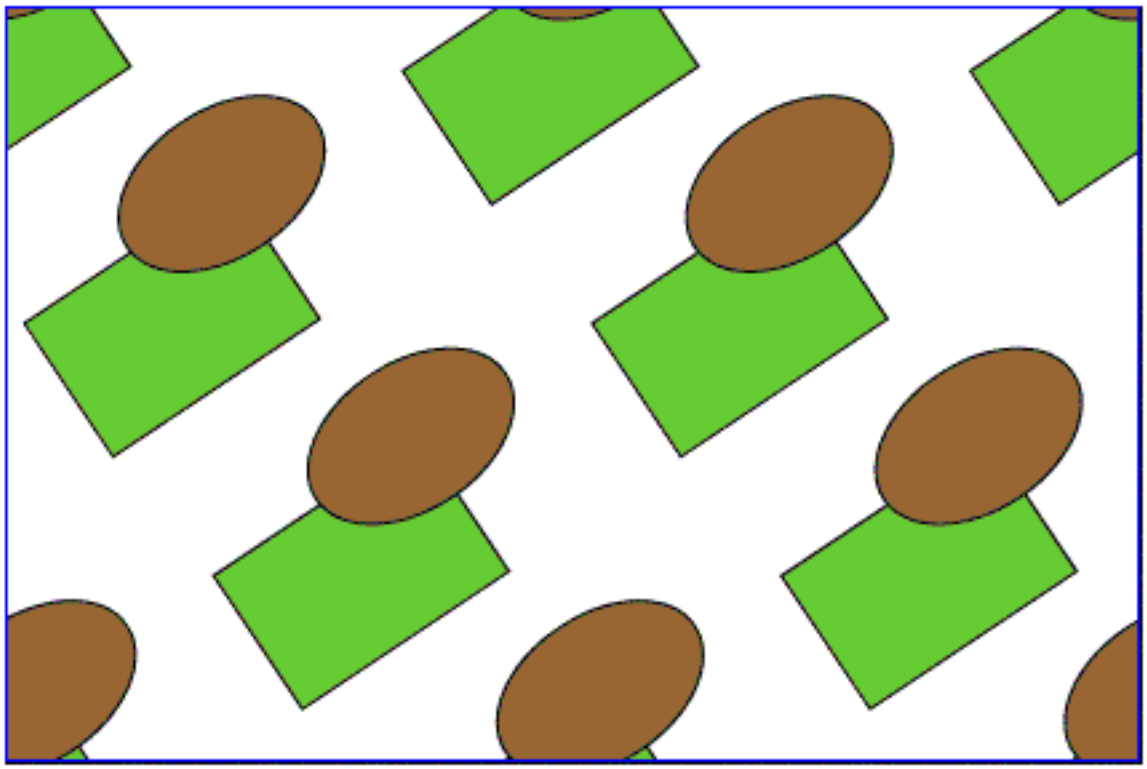
7.2. Introduction

The Seamless Repeat plug-in allows you to create a repetition of a pattern to fill the entire sheet. The pattern is repeated row by row, where each row can be slightly shifted from the previous one and rotated by an angle. The main usage of Seamless Repeat is to generate a seamless document in one or both directions. This implies that by putting the sheets side by side no seams whatsoever will be visible. By indicating the importance of the values, you will be able to select from a number of possible repetitions (see further on).

The Seamless Repeat plug-in uses the Trim Box size when specified.



With the Seamless Repeat plug-in you can repeat this pattern and create a new seamless document in both directions.



This document contains the following topics:

- *One-up document*
- *Seamless Repeat document*
- *From a one-up document to a seamless document*
- *From a Seamless Repeat document to a Seamless Repeat document*

7.3. One-up document

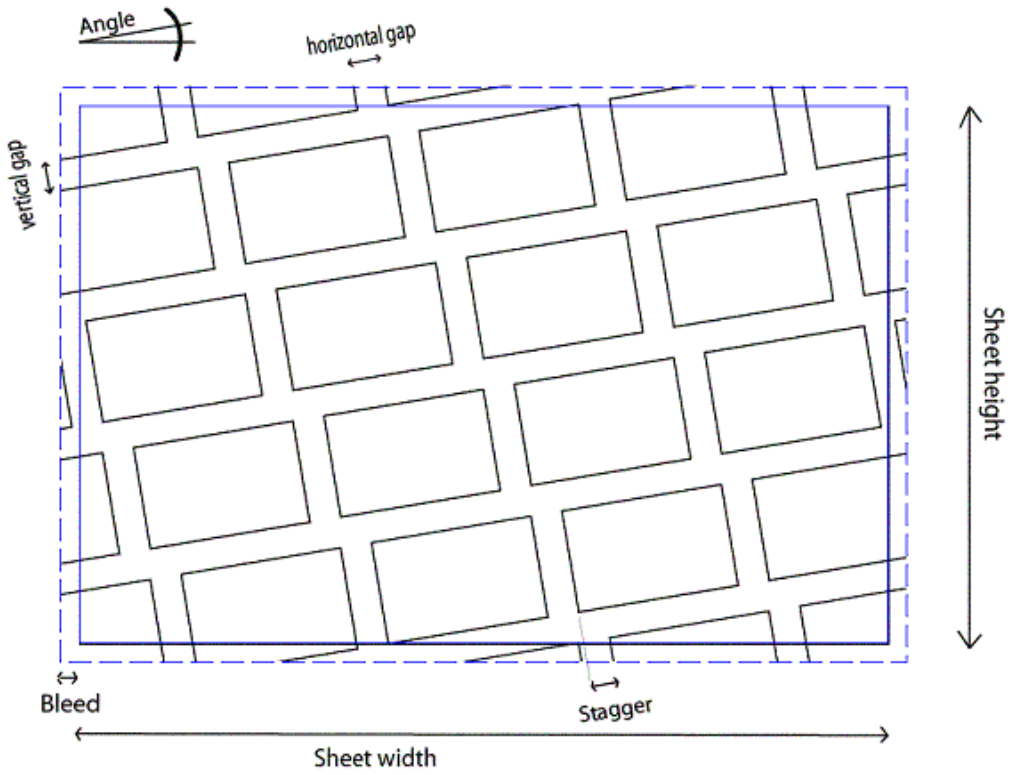
A one-up document defines the pattern that will be used when creating the Seamless Repeat document. The pattern can contain any object. When you want to define only part of the document as a pattern, the corresponding objects have to be selected. When nothing is selected, the complete one-up document will be used as a pattern when generating the Seamless Repeat document.

The width and height of the pattern can be defined in two ways:

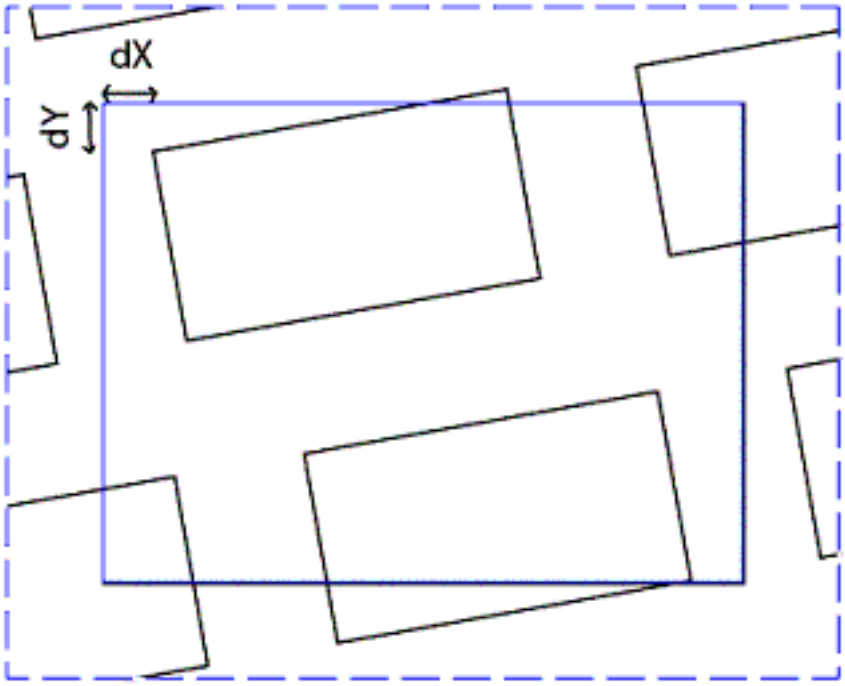
- If a **Trim Box** is defined, it is used as boundary of the pattern.
- When the Trim Box is not defined, the **bounding box of selected objects** (or all objects in the document, when nothing is selected) is taken into account.

7.4. Seamless Repeat document

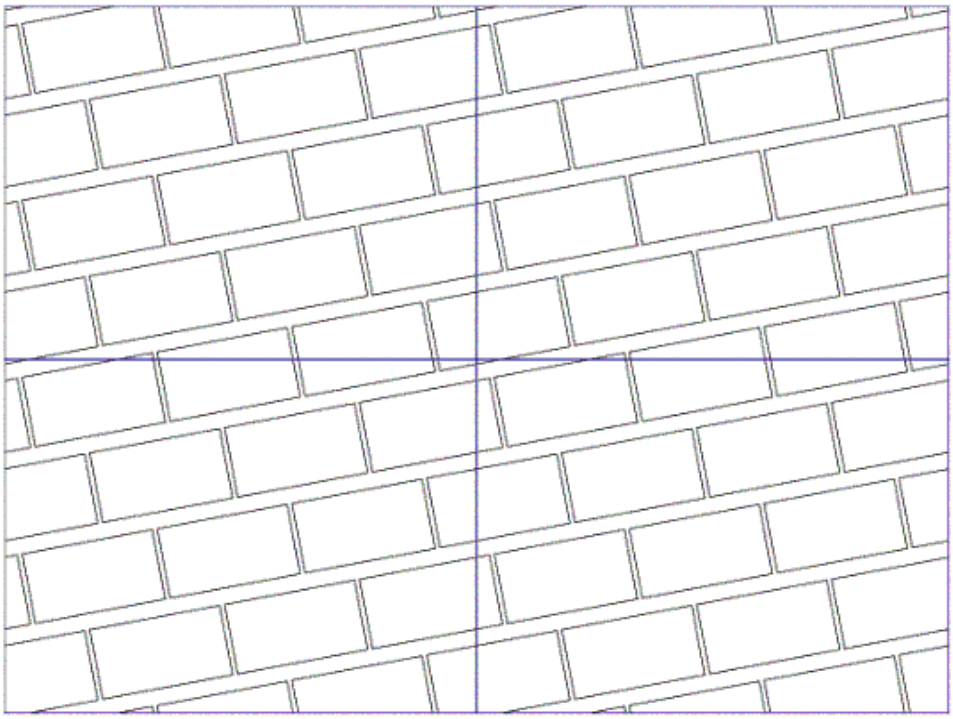
A Seamless Repeat document is created from a one-up document by repeating and copying the pattern.



As shown in the picture above, you can set many parameters when generating a Seamless Repeat document. The size of the created Seamless Repeat document is defined via *sheet width* and *sheet height* . The pattern is repeated row by row. Horizontal and vertical *gaps* between patterns can be defined. Each row can be shifted with a '*stagger*'. The resulting design can be rotated by changing the *angle* . The amount of *bleed* between the repeating objects and the creation mask around the final result can be defined as well.



You can also define where the first cell will be placed in relation to the top left corner of the sheet.



The main aim of Seamless Repeat is to generate a seamless document. This means that the final design can be connected to the same design without losing its continuity (as shown in picture above).

The user can indicate the appropriate direction in which the Seamless Repeat document should be continuous (non-seamless, horizontal-seamless, vertical-seamless, horizontal and vertical seamless). The picture above is seamless in both directions.

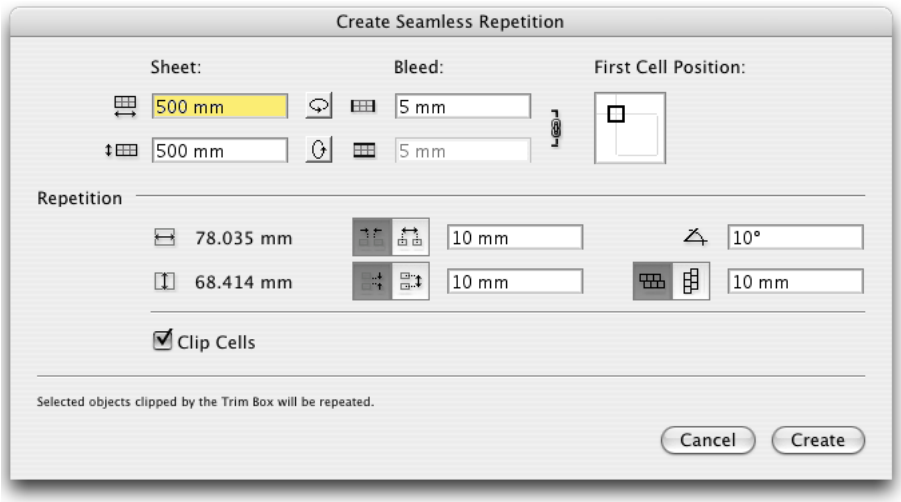
7.5. From a one-up document to a seamless document

The basic workflow starts by creating a one-up document that defines the pattern. Let's assume that the one-up document has already been defined.

From the menu select: Window > Esko > Seamless Repeat The "Create Seamless Repetition" dialog will appear, but depending on the case, the options may vary slightly.

- *Non-seamless*
- *Seamless*

7.5.1. Non-seamless



The dialog is divided into two parts:

Sheet In this part you can define the width and height of the sheet (= the final Seamless Repeat document), and the amount of bleed. By clicking the buttons you can indicate whether or not you want the document to be seamless in horizontal and/or vertical direction. Click the appropriate button to switch it on. In the First Cell Position part you can define the position of the first cell in relation to the top-left corner of the Seamless Repeat document. Only then can the shift of the first cell in relation to the top-left corner be defined.

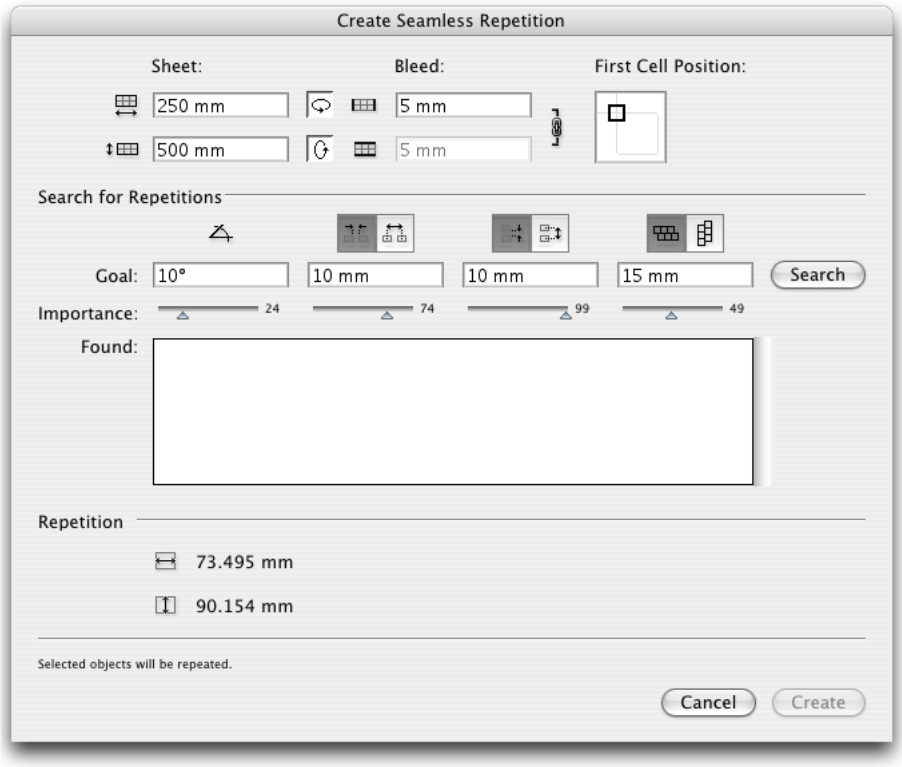
Repetition For the non-seamless generation the parameters for repetition can be defined as shown in the picture above. The utmost left labels specify the width and height of the pattern. The user has to

set the horizontal & vertical gap between the (centers of) patterns, horizontal or vertical stagger and angle for repetition. After clicking the "Create" button the Seamless Repeat document will be created.

Clip Cells : this toggle only appears once you have defined trim and media box. If toggled on, this will result in a clip mask being put on the basic cell size. If toggled off, the trim box will still be taken as the basic cell size but the graphics outside the trimbox will not be clipped.

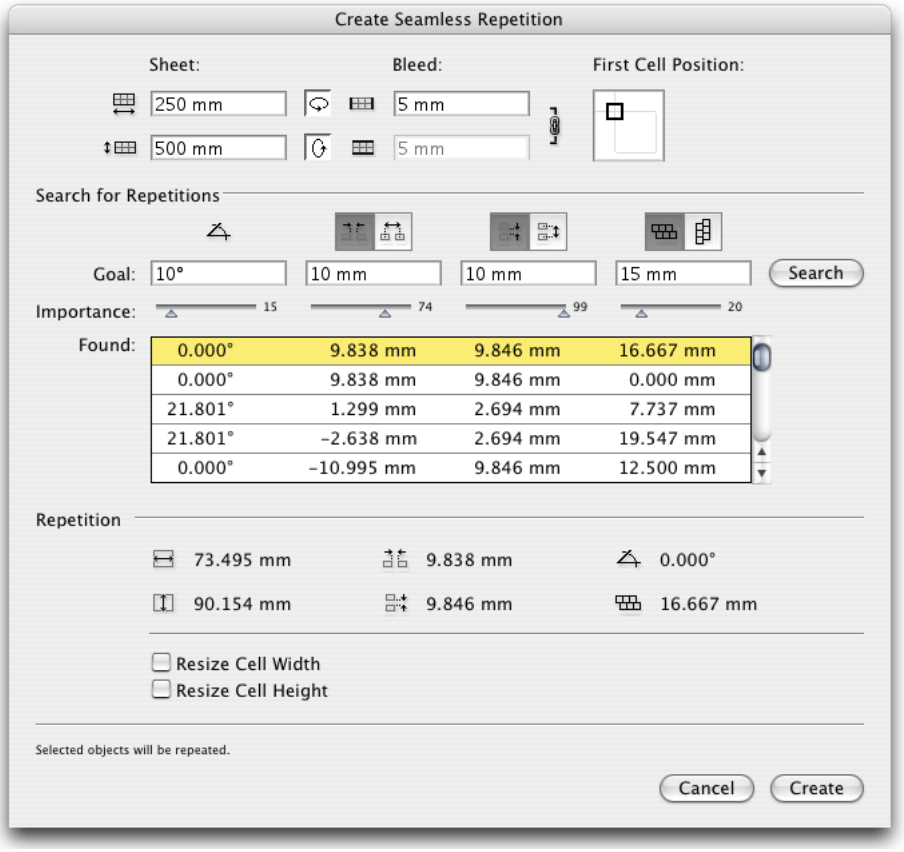
7.5.2. Seamless

When you want to create a seamless design, one of the buttons (or both) must be switched on. After switching this button on, the dialog slightly changes.



The " *Sheet* " part remains the same as in a non-seamless case. "Search for repetitions" appears.

Search for repetitions Since the final design should be seamless the values specified as "Goal" will be slightly adjusted to preserve continuity. You can set the expected goal values (angle, gaps, stagger) and indicate with the importance slider which parameter you consider most important. In the example above, preserving the angle is considered not that important, but the value for the vertical gap should be as close to the indicated value. Click the "Search" button to see the suggested values for generating a seamless document.



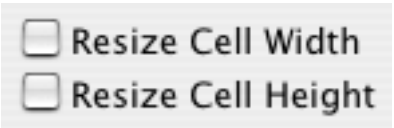
The Seamless Repeat plug-in engine generates the best matches for creating the Seamless Repeat document.

Repetition This part shows the result parameters for seamless generation:

- the width and height of the pattern
- the horizontal and vertical gap between repeating patterns
- the angle of rows
- the stagger

You have the possibility to overrule the suggested values for horizontal and vertical and stick to the values that were originally asked (Goal).

By checking the **Resize Cell** Width or Height box, you can indicate which gap (horizontal or vertical) you want to preserve.



E.g. When you switch on the 'Resize Cell Width' the horizontal gap will be the same as was asked. But, keep in mind that the width of the pattern has to be changed in order to keep consistency. **Resize Cells** specifies how to resize the final width/height of the pattern. The **Preview Cell Size** toggle shows you in the document itself how the size of pattern will be changed:

After clicking 'Create' the Seamless Repeat document will be created.

7.6. From a Seamless Repeat document to a Seamless Repeat document

Assume that a Seamless Repeat document has been generated. And suppose that you want to slightly change the generated document using the document as layout.Then there are two ways to change the Seamless Repeat document:

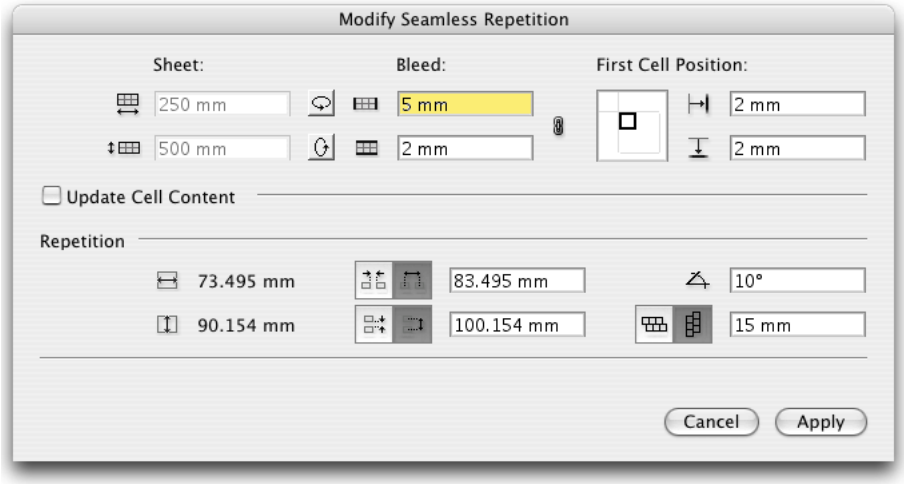
- *Use the same pattern and just slightly modify the parameters for generation.*
- *Use another pattern of the same size as used in the Seamless Repeat document and use the Seamless Repeat document as layout to regenerate the Seamless Repeat document.*

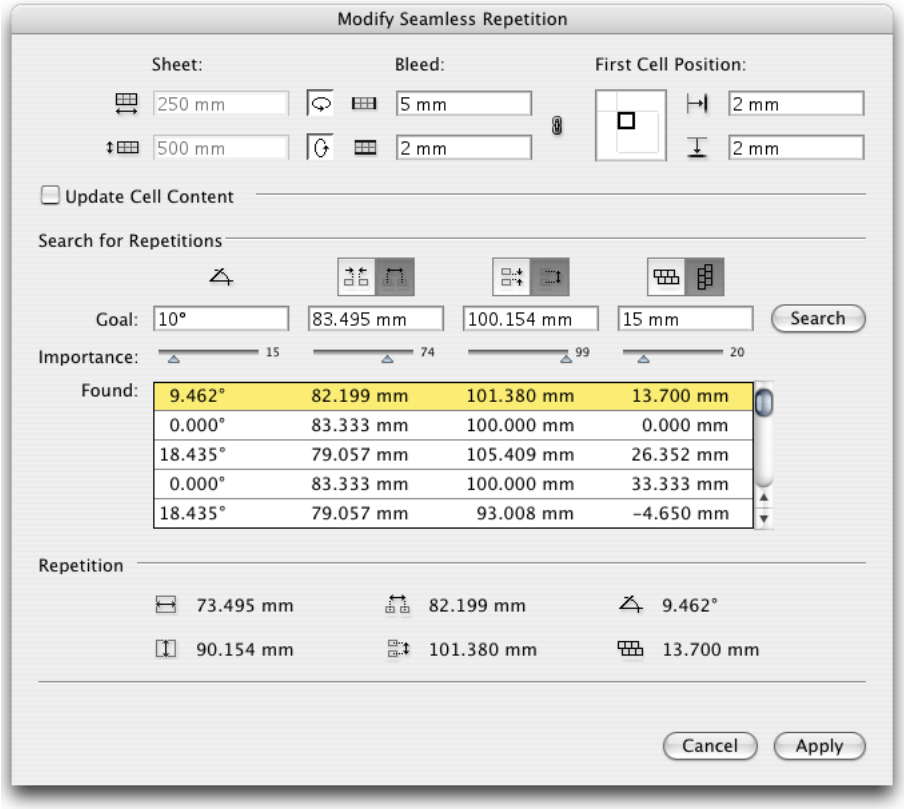
7.6.1. Use the same pattern

In this case you can use the same pattern and just slightly modify the parameters.

Select from the menu: **Window** > **Esko** > **Seamless Repeat...**.

One of the following dialogs appears (depending on a seamless/non-seamless case):





Both dialogs are nearly the same as what was shown in the previous workflow description *From a one-up document to a seamless document* .

Sheet In this case the width and height of the Seamless Repeat document can no longer be changed. Other parameters in this part can be changed.

Update Cell Content See the next chapter *Use another pattern* for more information.

Search for Repetition This part is identical to what is described in the previous workflow. The initial values are the same as the ones that were asked in the one-up document. The dialog offers the result you chose before.

Repetition This part is identical to what is described in the previous workflow. The only change is that you cannot modify the width and height of the pattern.

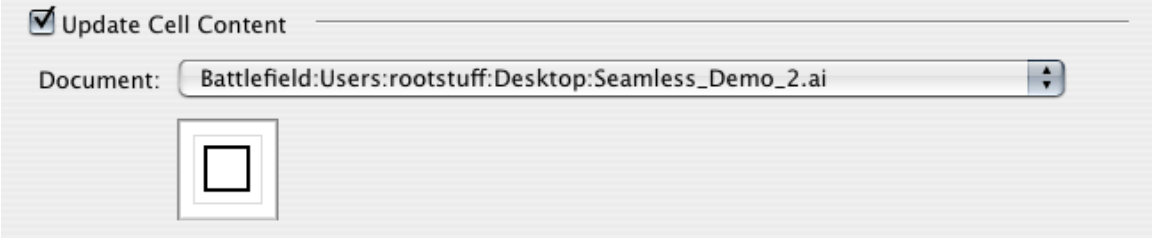
After applying the changes the document will be regenerated using the same pattern.

7.6.2. Use another pattern

In this case you can use another pattern of the same size as the one that is used in the Seamless Repeat document and use the Seamless Repeat document as layout to regenerate the Seamless Repeat document.

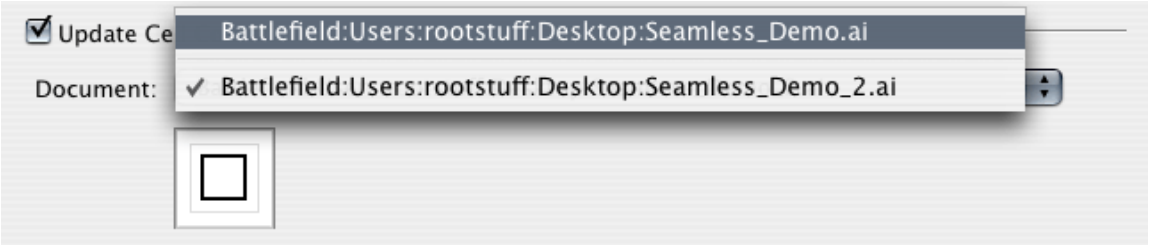
You have the possibility to choose another one-up (pattern) for the Seamless Repeat document regeneration.

Check the **Update Cell Content** box:



The original one-up document and all Illustrator's opened documents are offered as a documents defining pattern for re-creation of the Seamless Repeat document.

You can choose the document by which the pattern should be replaced.



If the pattern is of a different size than the original one, the user has to trim it to the same size.

The dialog item: is used to specify how to trim the pattern.

As before, all the other “Goal” parameters can be changed. After applying this, the pattern in the Seamless Repeat document is replaced and the Seamless Repeat document is regenerated.

Caution:

The Seamless Repeat plug-in remembers the last user-defined values in the “Sheet” and “Search for Repetion” part. When a non-seamless case is used it remembers user-defined values in the “Repetition” part.In case of a new “one-up document to Seamless Repeat document” workflow, the values that were stored last are used.