

# DeskPack PowerTrapper 20

User Manual

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# Contents

<b>1. Copyright Notice.....</b>	<b>5</b>
1.1. Third party license information.....	6
<b>2. About DeskPack PowerTrapper.....</b>	<b>30</b>
<b>3. Data Exchange.....</b>	<b>31</b>
3.1. Introduction to Data Exchange.....	31
3.1.1. Data Exchange Preferences.....	31
3.2. The PDF Export Plug-In.....	31
3.2.1. Introduction.....	31
3.2.2. Saving a File as Normalized PDF or PDF+.....	31
3.2.3. PDF Export Settings.....	32
3.2.4. PDF Export Preferences.....	39
3.2.5. Linked ArtiosCAD Graphics for Normalized PDF export.....	41
3.3. The Ink Manager Plug-in.....	41
3.3.1. Using the Ink Manager palette.....	41
3.3.2. Normalized PDF or PDF+.....	42
3.3.3. Ink Options.....	44
3.3.4. The Ink Manager flyout menu.....	45
3.3.5. Printing Method.....	47
3.3.6. Job Setup.....	47
3.3.7. DGC Curve.....	48
3.3.8. Processing Steps.....	48
3.3.9. Ink Manager Preferences.....	51
3.3.10. Known limitations.....	53
3.4. The Structural Design Plug-in.....	53
3.4.1. Introduction.....	53
3.4.2. Importing Structural Design files.....	54
3.4.3. Exporting Structural Design files.....	63
3.5. The Page Box Plug-in.....	76
3.5.1. Introduction.....	76
3.5.2. Trim Box and Media Box.....	76
3.5.3. All Page Boxes.....	79
3.6. The Inspection Setup Plug-In.....	81
3.6.1. Adding and changing Inspection points.....	82
3.6.2. Adding and changing Inspection boxes.....	83
3.6.3. Dynamic Art Placeholders.....	83
3.6.4. Import and Export.....	83
3.7. Messages.....	84
3.7.1. The Messages Palette.....	84

3.7.2. Filtering the Messages.....	85
3.7.3. Saving the Messages.....	86
3.7.4. Clearing the Messages.....	87
3.8. Esko Document Setup.....	87
3.8.1. Distortion.....	87
3.8.2. Screen Registration.....	87
3.9. Annotations.....	88
3.9.1. Loading XFDF files.....	88
3.9.2. The Annotations palette.....	89
3.9.3. Multipage PDF files with Annotations.....	90
3.9.4. Editing WebCenter annotations.....	90
3.9.5. Creating new annotations using the Annotation Tool.....	91
3.9.6. Updating and Saving Annotations.....	92
3.10. Esko Plug-ins Dashboard.....	93
3.10.1. Opt Out.....	93
3.10.2. More about the dashboard and data collection.....	93
<b>4. DeskPack Trapper.....</b>	<b>95</b>
4.1. Introduction to DeskPack Trapper for Adobe Illustrator.....	95
4.1.1. What is Trapping?.....	95
4.2. Trapping mode: Trapping.....	96
4.2.1. Automatic Trapping.....	96
4.2.2. Manual Trapping.....	98
4.3. Trapping Mode: Reverse Trapping.....	105
4.3.1. Starting Reverse Trapping.....	106
4.3.2. Updating the Reverse Trap Layer.....	107
4.4. Working with Trap Tags.....	107
4.5. Trapping on Server.....	109
4.5.1. The Trapping on Server Workflow.....	111
4.5.2. Selective Trapping.....	112
4.5.3. Processing Step Layers.....	113
<b>5. PowerTrapper for Adobe Illustrator.....</b>	<b>114</b>
5.1. Introduction to PowerTrapper for Adobe Illustrator.....	114
5.1.1. What is Trapping?.....	114
5.1.2. What is PowerTrapper Classic?.....	115
5.1.3. DeskPack Trapper for Adobe Illustrator.....	115
5.2. Trapping with PowerTrapper Classic.....	115
5.2.1. The Trap Dialog.....	117
5.2.2. The Trap Layer.....	131
5.2.3. The Trap Select Tool.....	131
5.2.4. The Color Pairs Palette.....	131
5.3. Selective Trapping.....	137
5.4. Add Rich Black.....	137

5.5. PowerTrapper Classic Preferences..... 138

**6. White Underprint..... 141**

6.1. White Underprint..... 141

6.2. Adding and Removing White Underprint..... 141

6.3. White Underprint settings..... 142

6.4. White Underprint Ink..... 142

6.5. Include White Objects..... 143

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## 2. About DeskPack PowerTrapper

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The 'DeskPack PowerTrapper for Illustrator' bundle offers dedicated trapping functionality, combined with the ability to add White Underprint.

It combines the following plug-ins:

- [Data Exchange](#) on page 31 (Free)
- [PowerTrapper for Adobe Illustrator](#) on page 114
- [DeskPack Trapper](#) on page 95
- [White Underprint](#) on page 141

## 3. Data Exchange

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### 3.1. Introduction to Data Exchange

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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

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### 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+

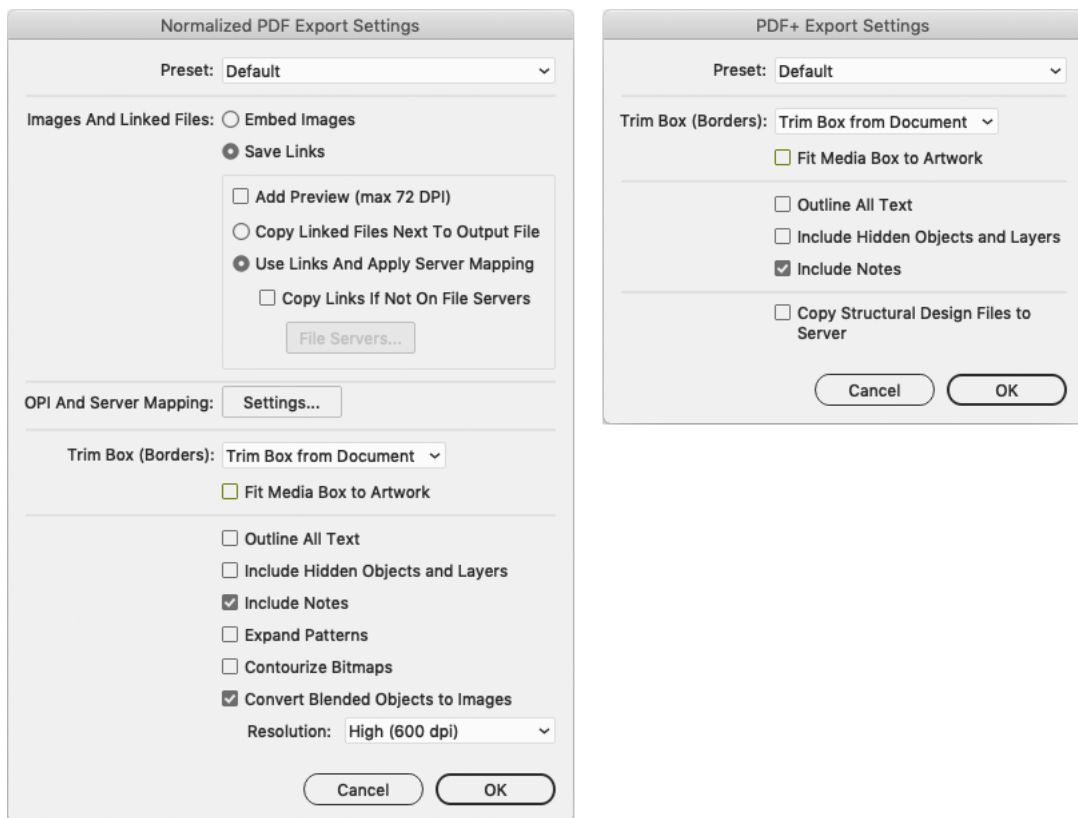
To save your Illustrator file as Normalized PDF or PDF+ using **PDF Export**:

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).

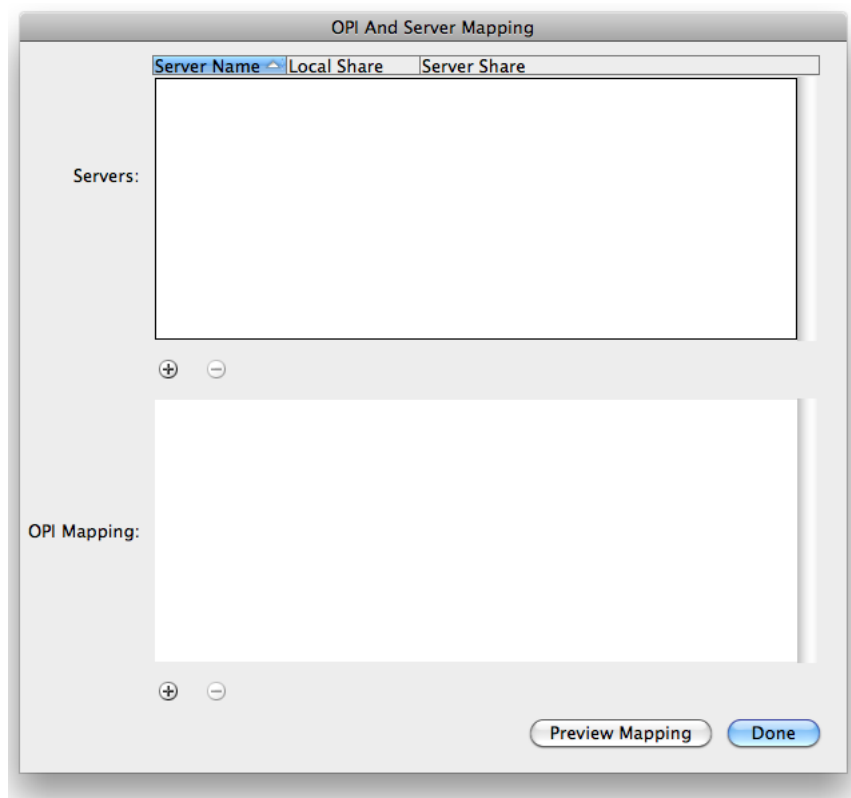
4. When choosing **Use Links And Apply Server Mapping**, fill in a Server Mapping if the share names on the client machine and on the other server do not match.

- a) When checked, **Copy Links If Not On File Servers** verifies if linked images are already on file servers 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**

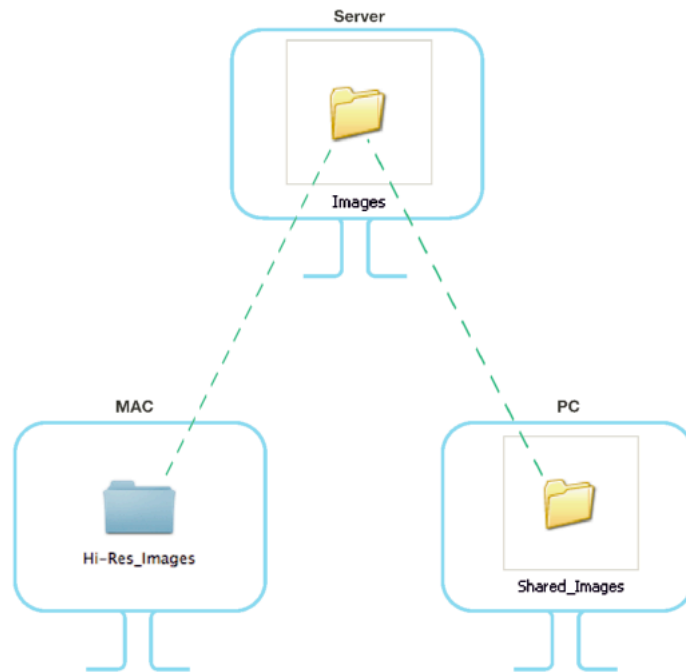
The top pane of the dialog configures **Server Mappings**. You need to use Server Mappings when the Normalized PDF you output:

- 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:

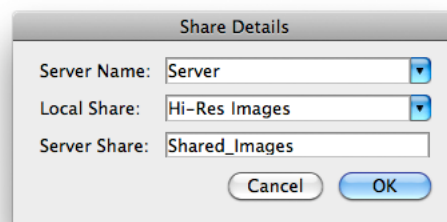
- the linked images are saved on a file server called "Server", in a shared folder called "Images",
- your copy of Illustrator with PDF Export is on a Mac, and the shared folder containing the images is mounted as "Hi-Res\_Images".
- the Normalized PDF you export will be used on a PC, where the shared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

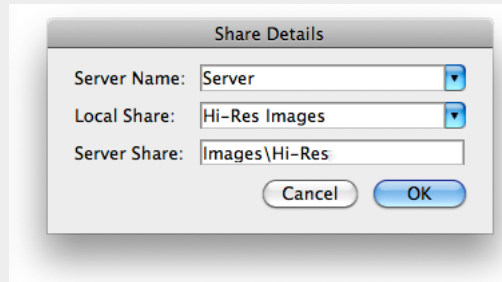
When adding the Server Mapping in the **OPI And Server Mapping** dialog, you should enter the **Share Details** as follows by:

- 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**.

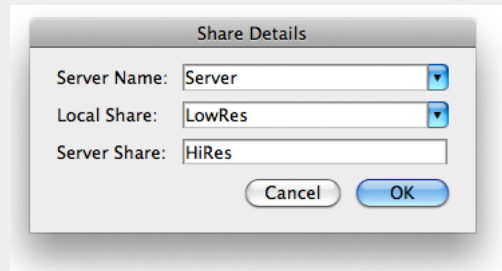


**Note:**

- You can use subfolders in a Server Mapping.

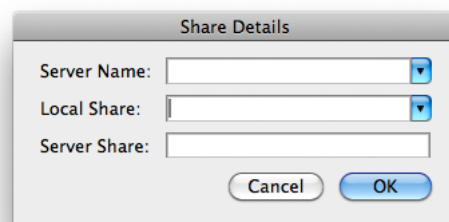


- You can also use Server Mappings to replace images (for example to swap low-resolution for high-resolution images **when the low-resolution and high-resolution images have identical separations**).

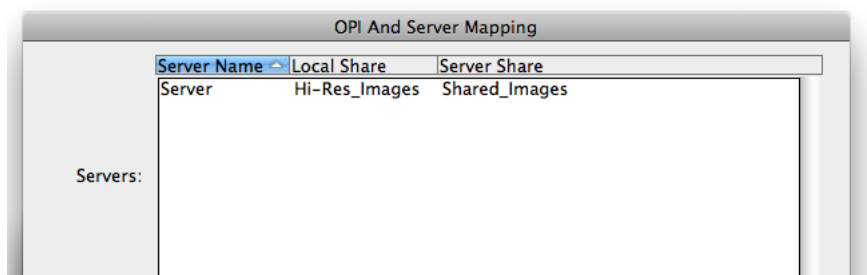


To add the Server Mapping, do the following:

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.

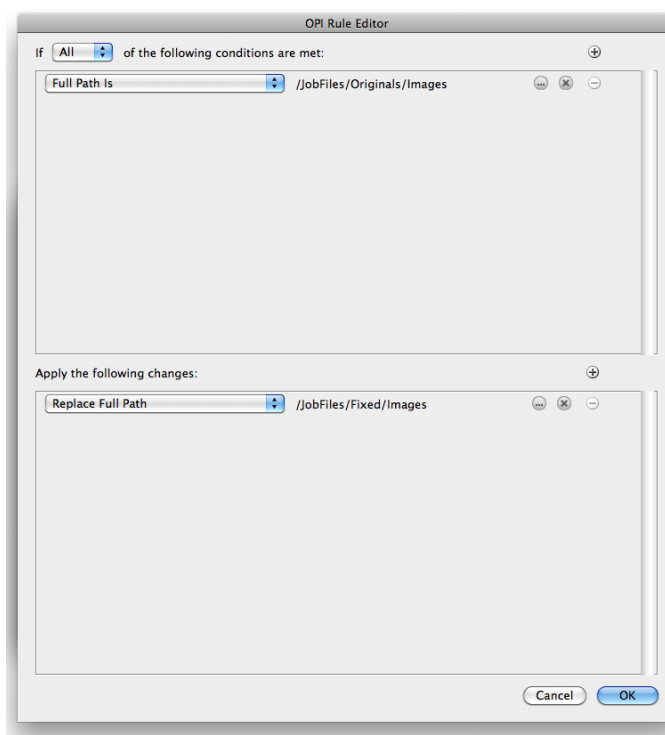
To edit a Server Mapping, double-click it. To remove a Server Mapping, select it and click the minus button to the lower left of the Servers pane.

### 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.

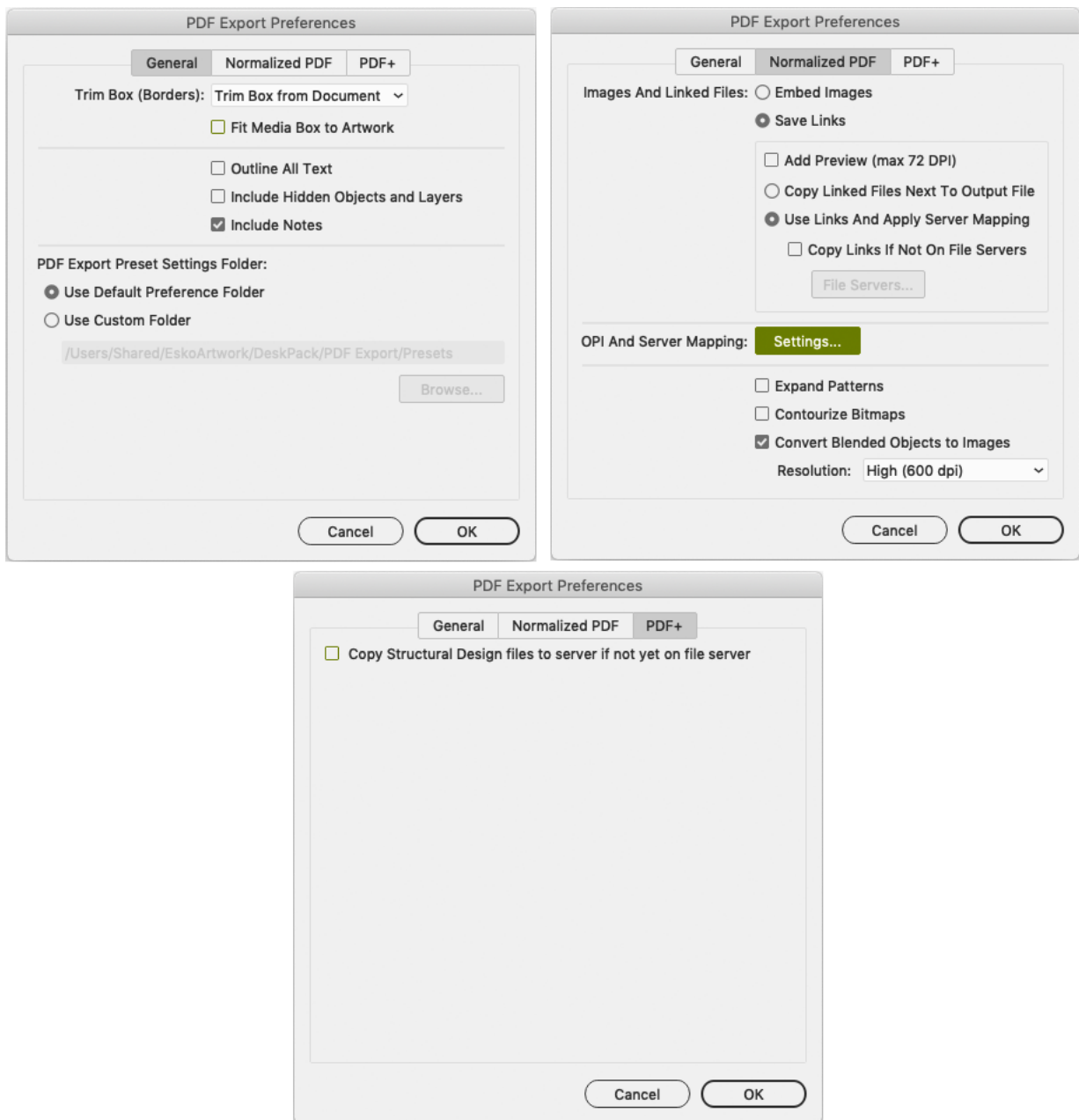
**Contourize Bitmaps** will convert 1-bit images (linked or embedded) into vectors.

**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 overprint setting (one is overprinting, the other is not), the conversion 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

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### 3.3.1. Using the Ink Manager palette

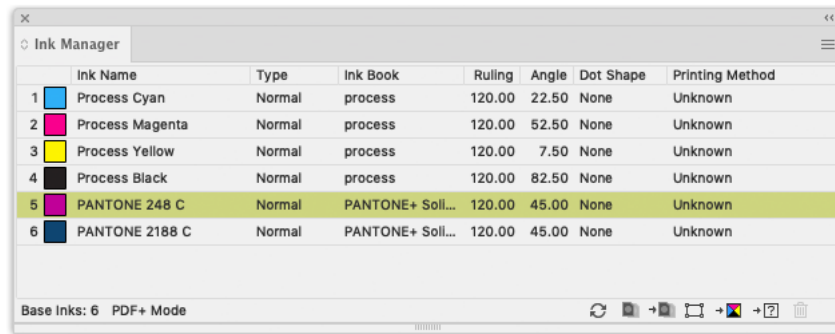
The Ink Manager palette is a powerful pre-press color editing and proofing tool. Easily identify where Pantone colors are used within a document or where custom spot colors can be found, then convert these colors to a custom spot color or to process colors.

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 file 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.

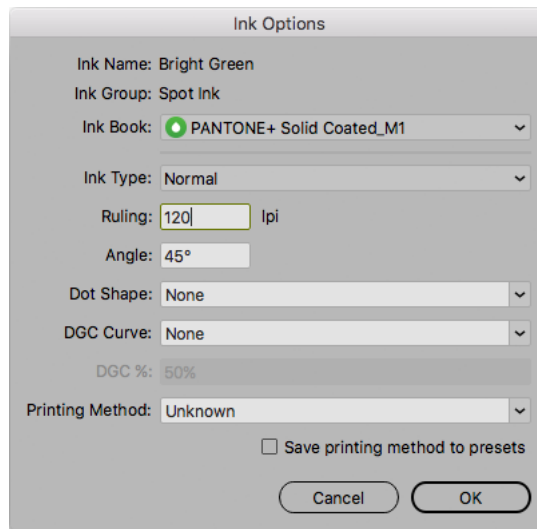
### What is the difference between regular PDF, PDF+, and Normalized PDF

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 <ul style="list-style-type: none"> <li>• <b>Embedded</b></li> <li>• <b>Linked &amp; Embedded.</b> If a PDF+ file contains image links, a full resolution embedded version of the image will still be saved in the file.</li> </ul>	Images can be <ul style="list-style-type: none"> <li>• <b>Embedded</b></li> <li>• <b>Linked</b></li> </ul>
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.

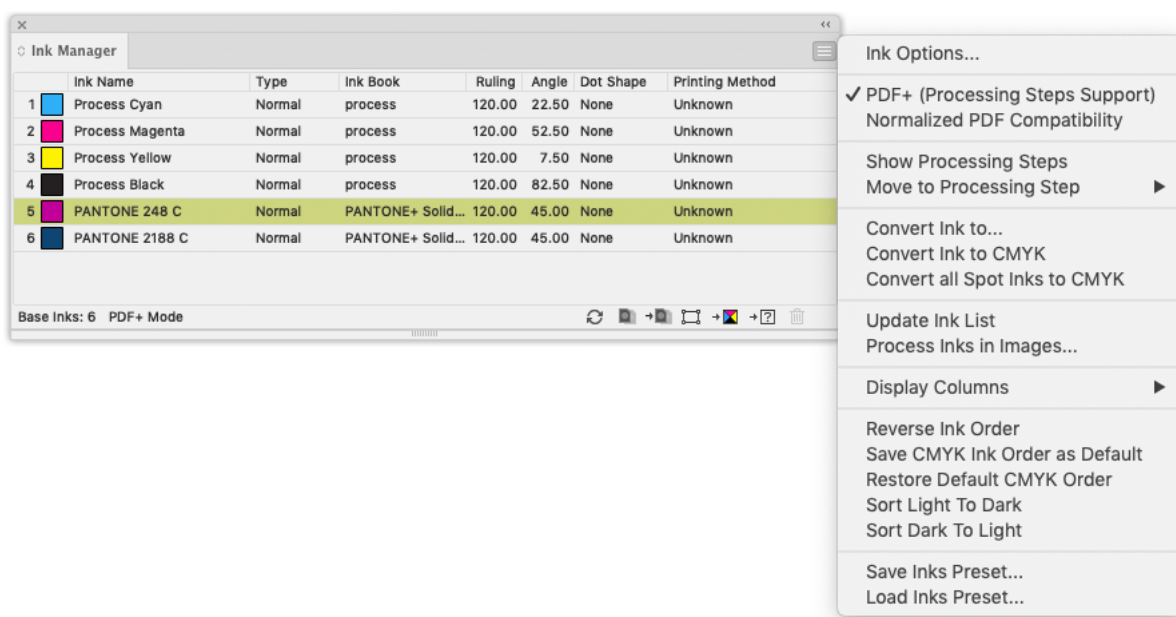
You can define a DGC Curve and a DGC percentage. See [DGC Curve](#) on page 48



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.

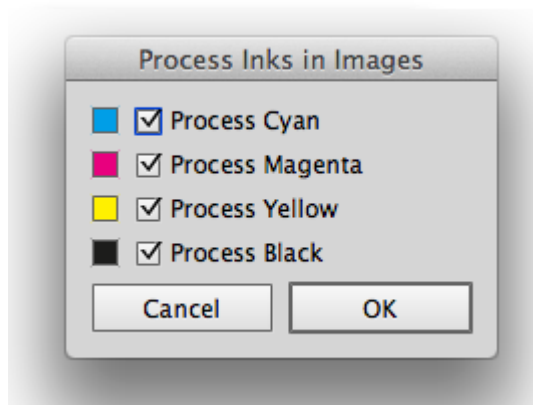
**Note:**

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 luminosity. 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.

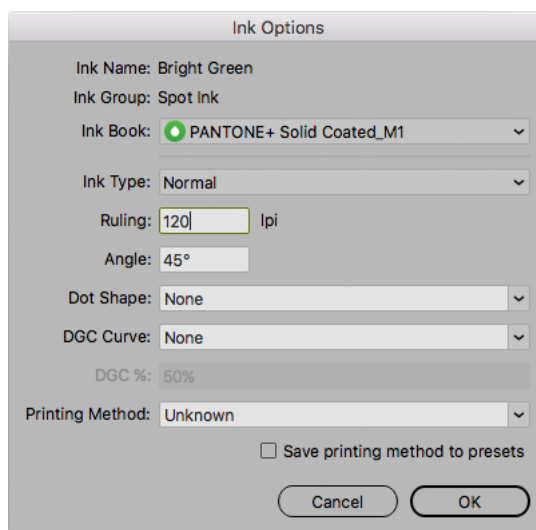
You can select one of the predefined printing methods, or create a new printing method.

#### 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 Parameters, 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 parameter:

-  : 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 selecting 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.

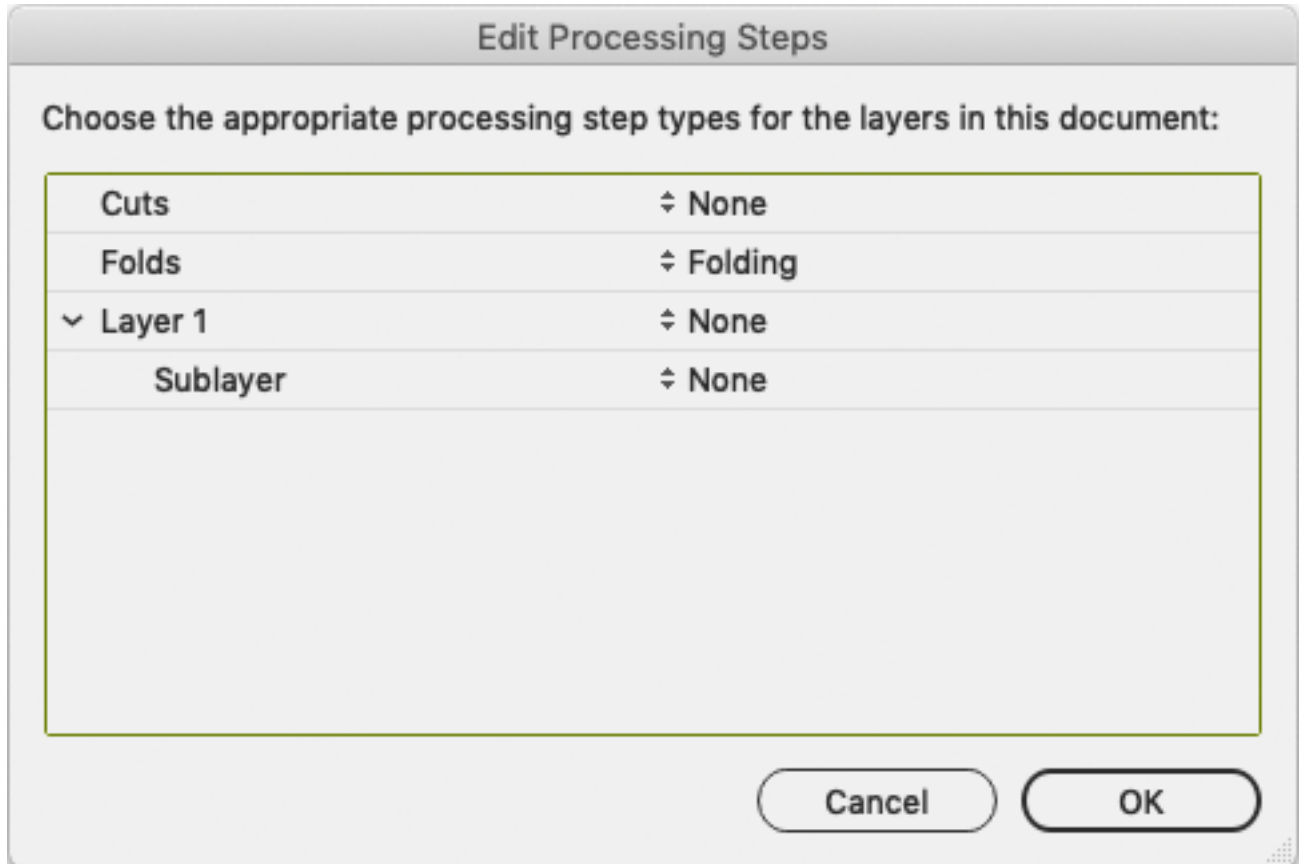
### The Processing Steps palette

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.

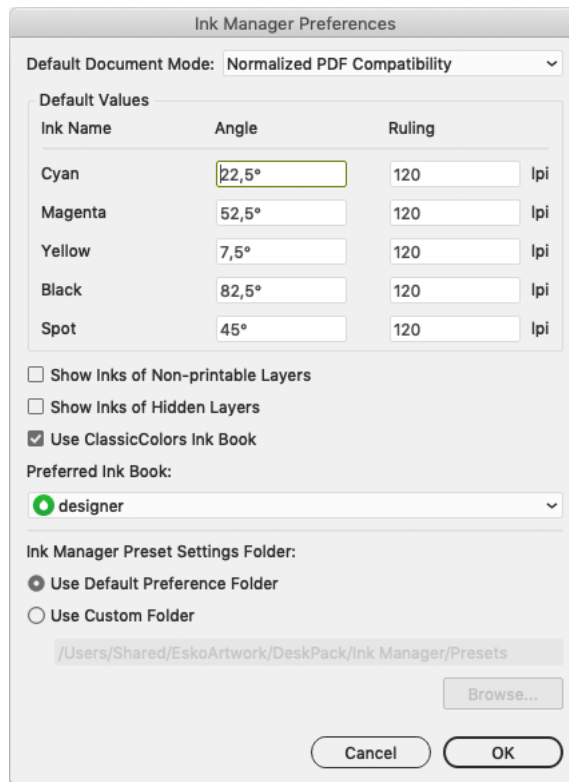
## Move to Processing Step

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 functionality 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

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### 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

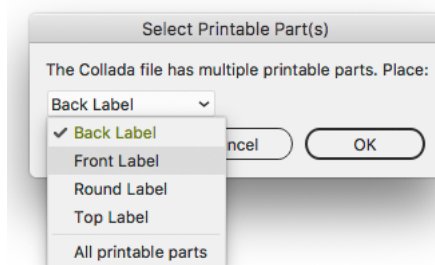
After opening or placing a structural design file, the file appears in the Adobe Illustrator layer palette. The Structural Design paths are special paths that cannot be modified accidentally. By default the Structural Design layer and its sublayers will be locked. You can unlock the Structural Design 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....**

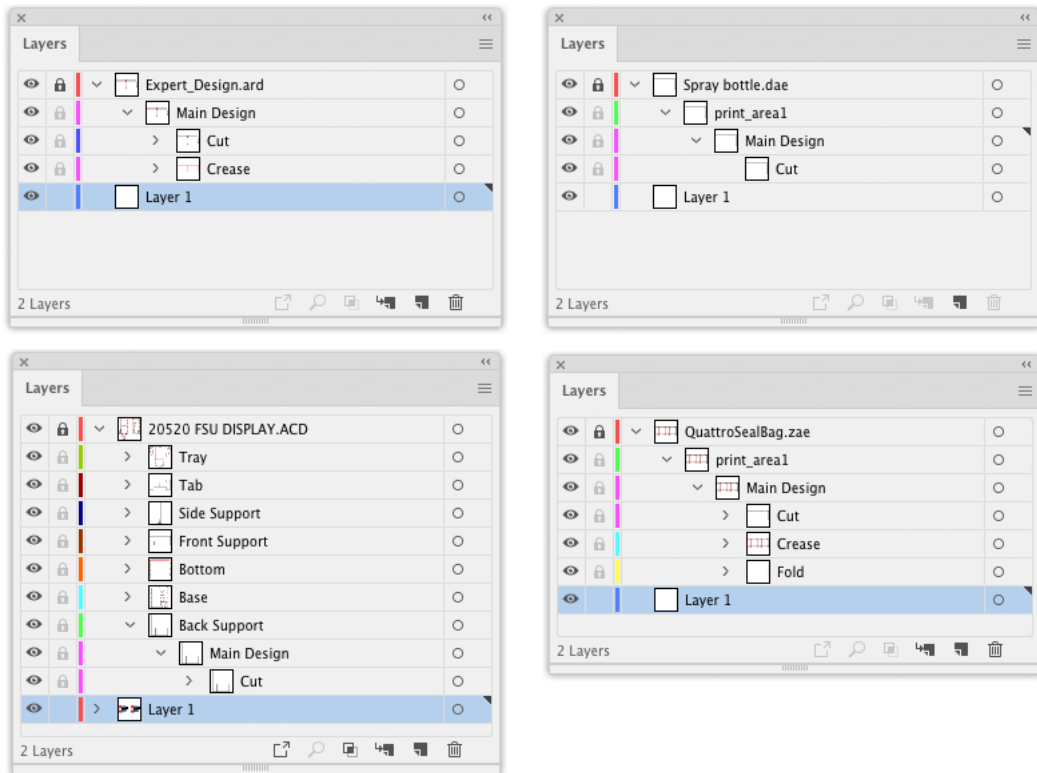
In case a Collada file is placed, a check is performed to see if the Collada file has a printable part defined. See [General Principles](#) on page 54

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.

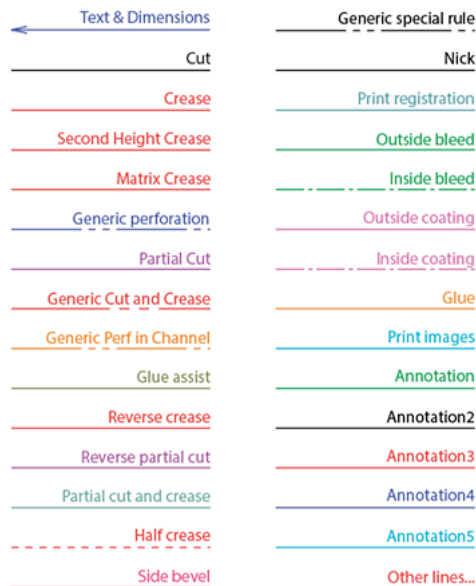


After opening a Structural Design file, the Structural Design objects are converted to special Illustrator objects.

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

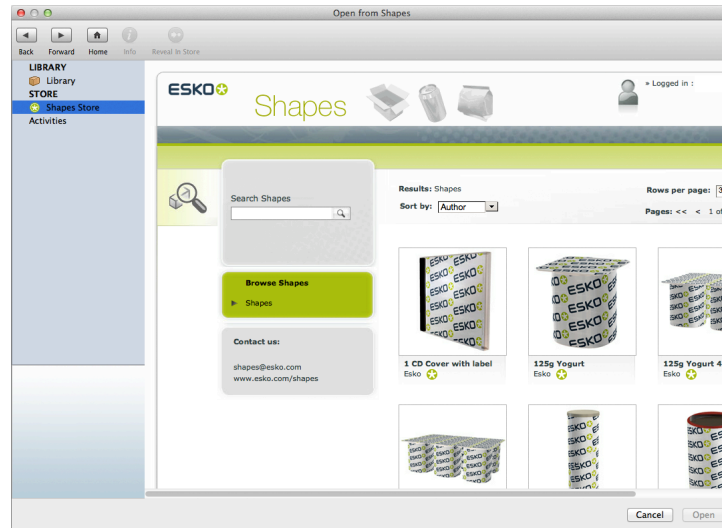
The **Shapes** Store is a constantly growing online collection of quality 3D models in Collada file format. If you have a subscription or maintenance contract for Studio or ArtiosCAD, you can download all available models. The section "free samples" are free for anyone with an Esko ID.

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.

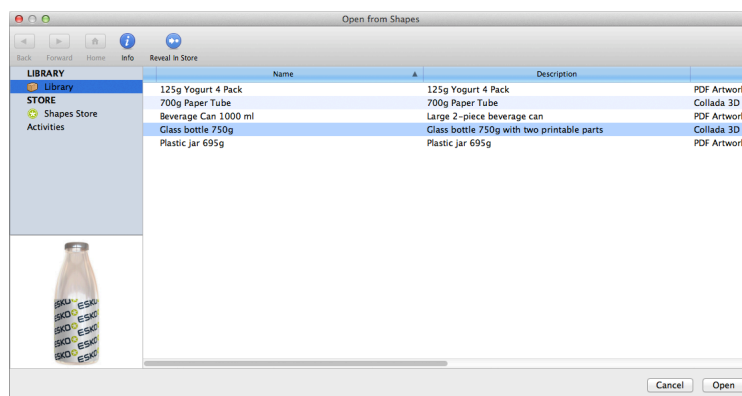
1. In an open Illustrator document, click **File > Structural Design > Place from Shapes....**

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**.



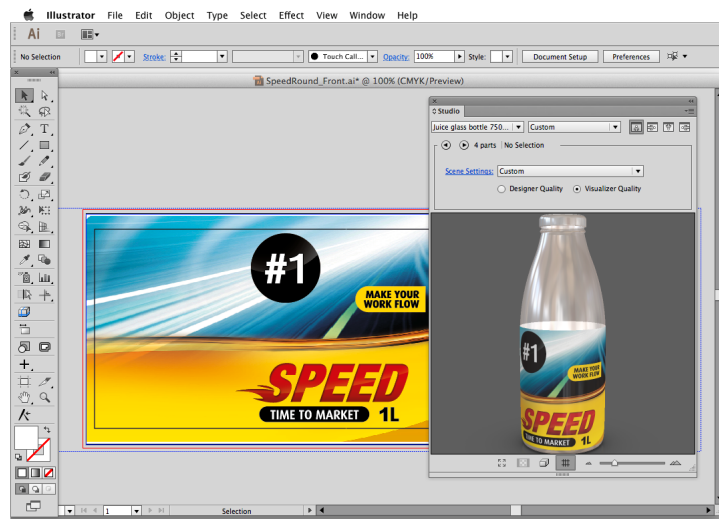
There is a "Shapes Store" section where you can browse all the models on the cloud, and a "Library" section, where you see all the assets that you have downloaded so far. When opening the Shapes window, the last used section will be active.

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**

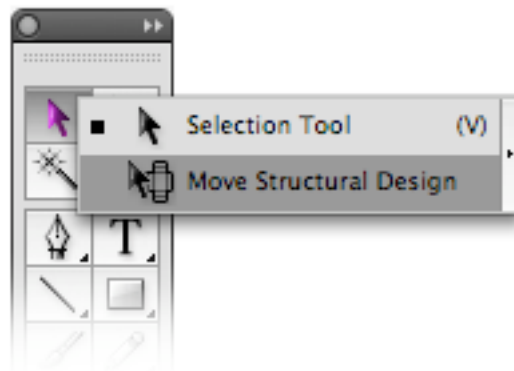
### Replace the Structural Design File

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

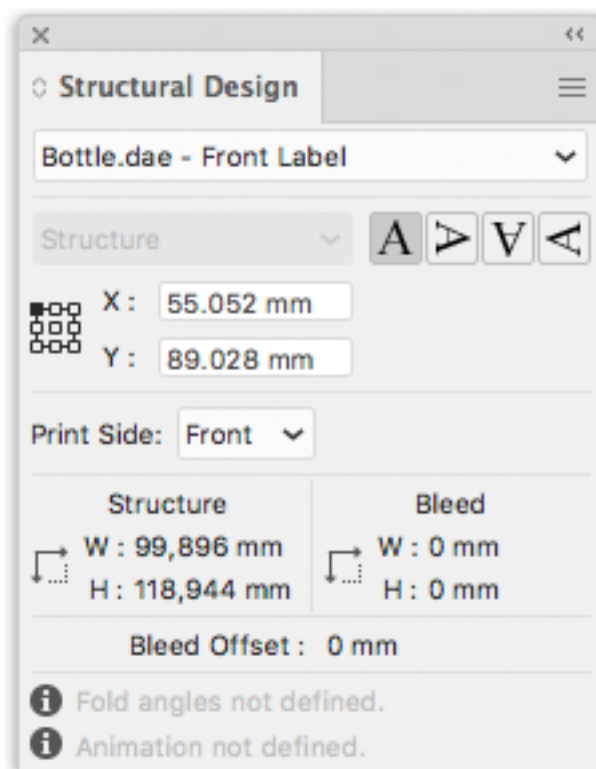


The **Move Structural Design** tool has been added underneath the Illustrator select tool. Select this tool to move the Structural Design interactively without unlocking the Structural Design layers. Hold down the mouse button and drag to move the Structural Design.

**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.

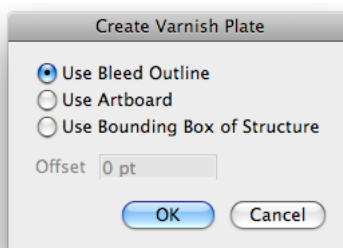
The lower part of the palette shows the width and height of the **Structure** and **Bleed** bounding boxes. **Bleed Offset** indicates the offset between the structure and the bleed contour.

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.

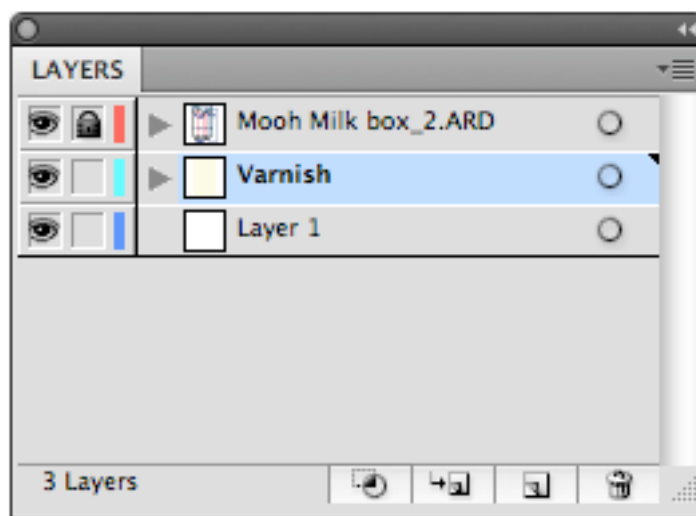
**Note:** When using **Use Bleed Outline** or **Use Bounding Box of Structure**, a varnish plate will be created for every printable part in the current Illustrator document.

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.

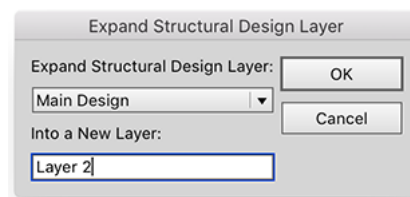
**Note:**

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.

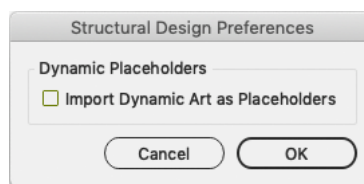
All art on the Structural Design layer will be copied to the new Illustrator layer. The art on the new layer is no longer tagged as Structural Design objects.

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.

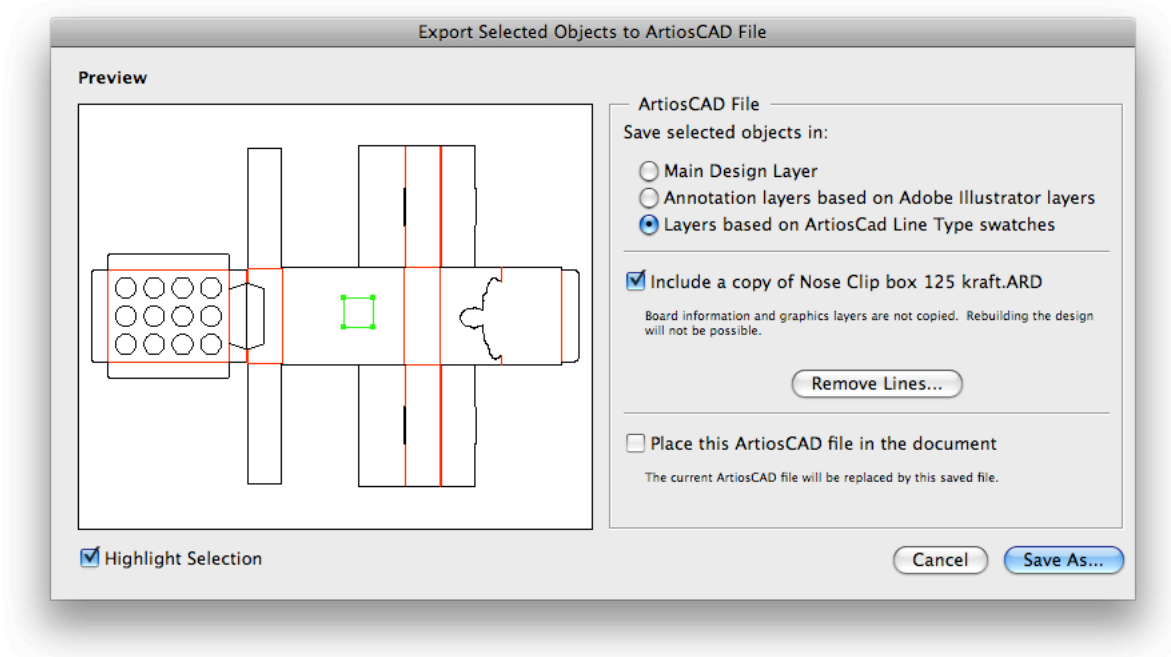
If you are exporting an Artios Canvas file (.acd) containing multiple printable parts, you can choose to export the ACD file as a single ACD file, or as multiple individual ARD files, one for each part.

#### 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.



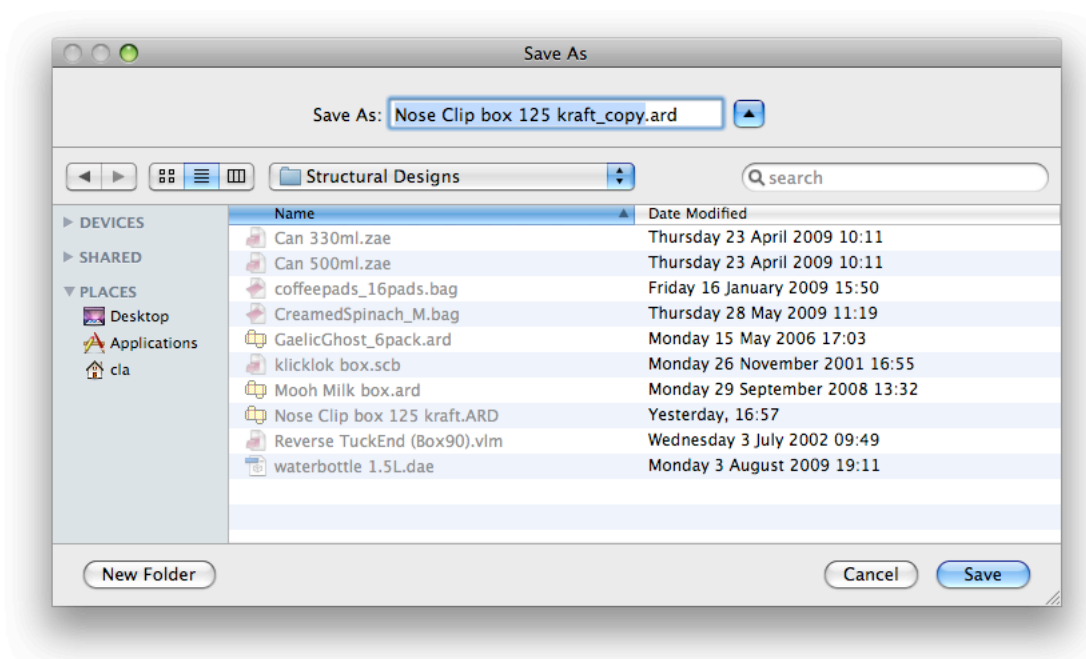
### Place this ArtiosCAD file in the document

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 contoured.

**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

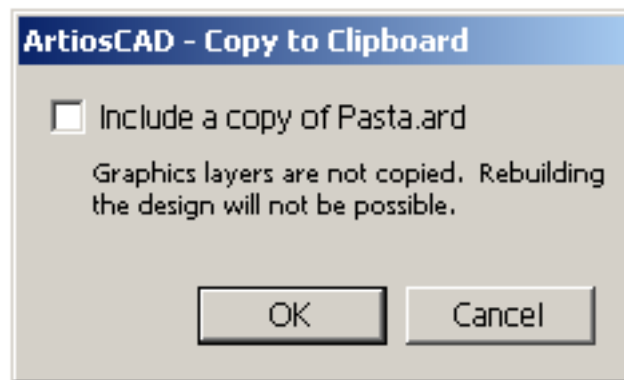
**Note:**

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 contoured.



**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.

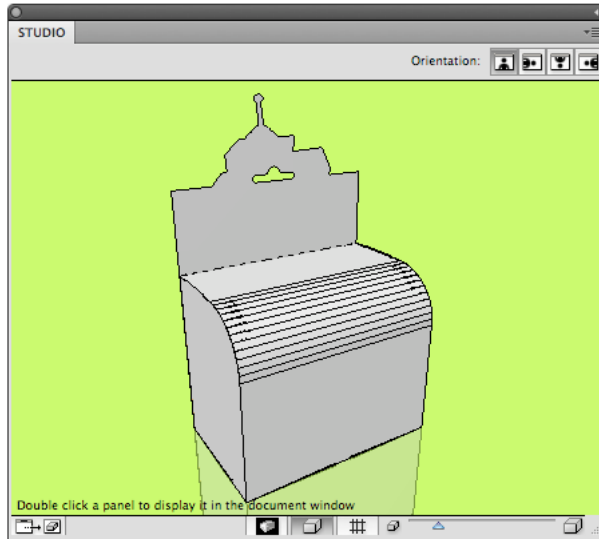
## Relationship between stroke color in Illustrator and line type in ArtiosCAD

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.

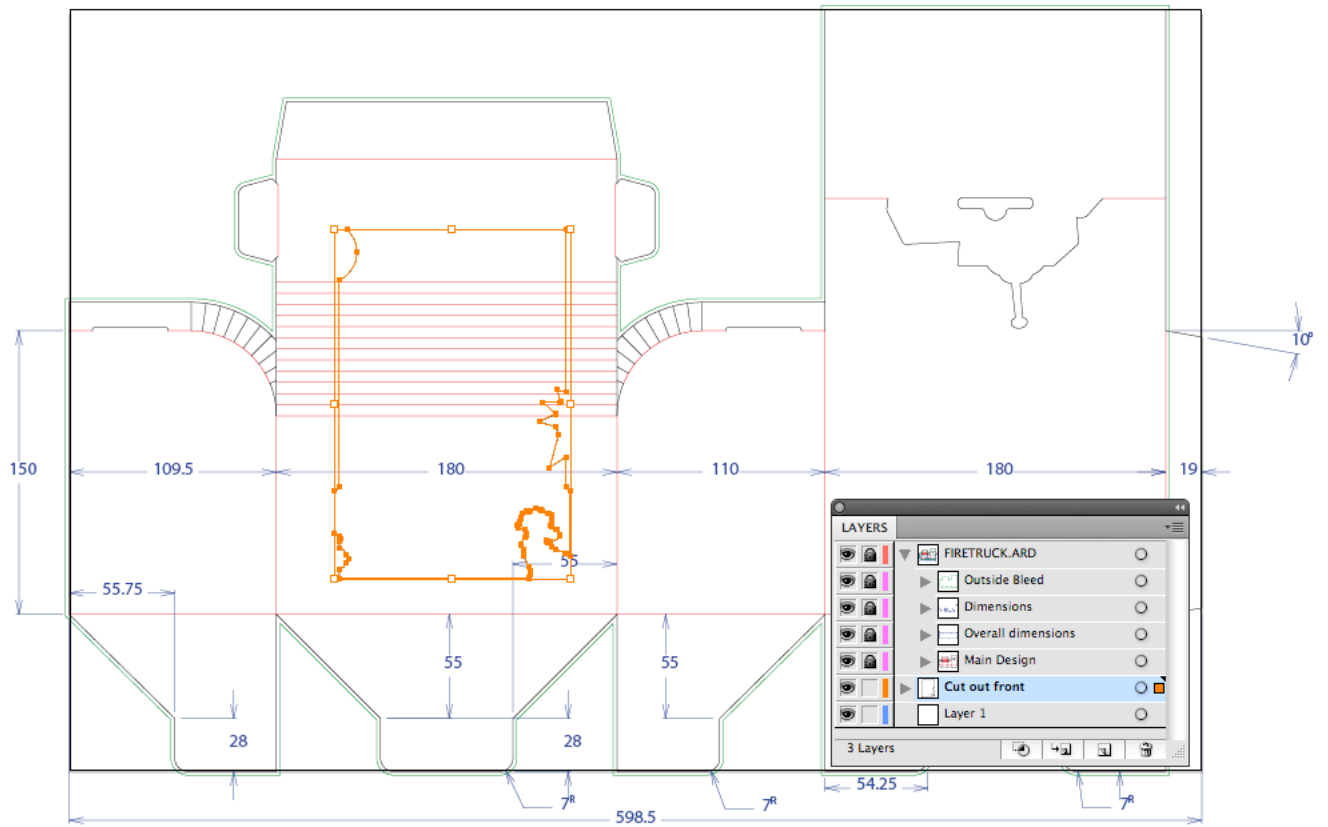
## How to add a cutout window to an existing ArtiosCAD file?

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.

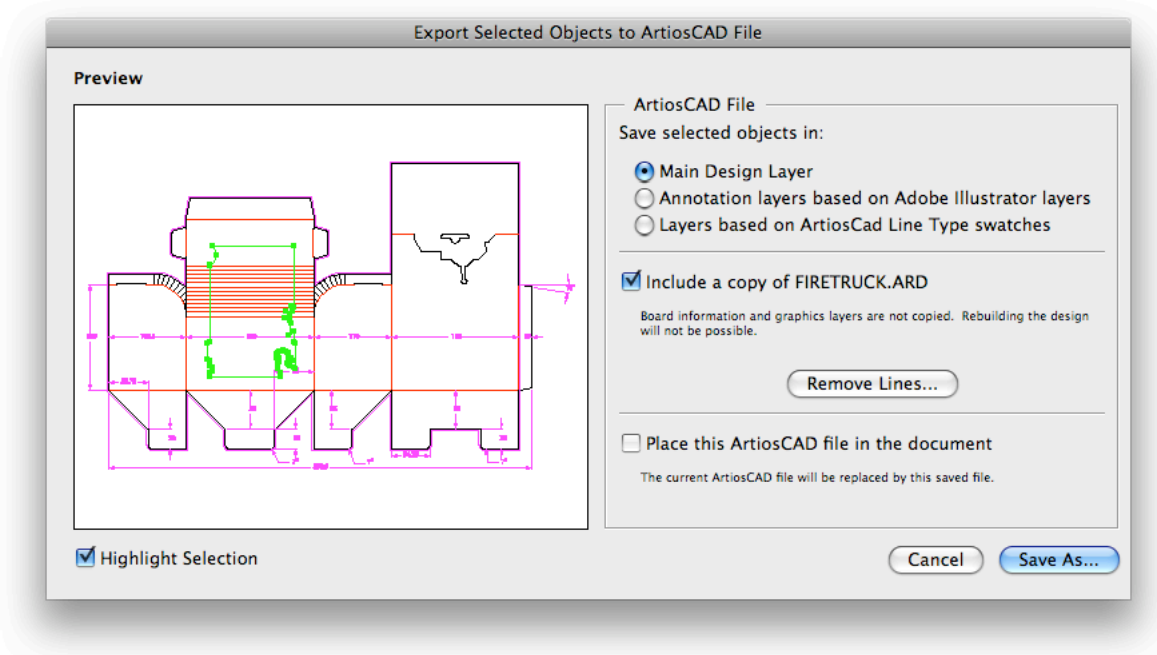


2. Create and select the cutout shape that you want to add to the ArtiosCAD file.



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

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



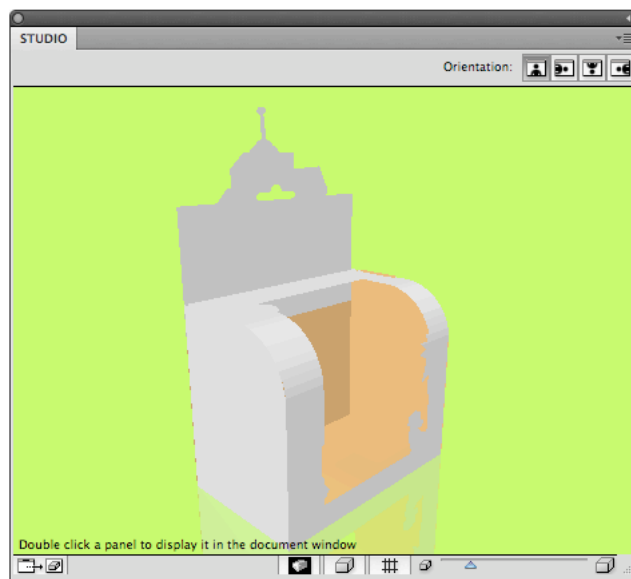
**4.** Do one or more of the following:

- 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.

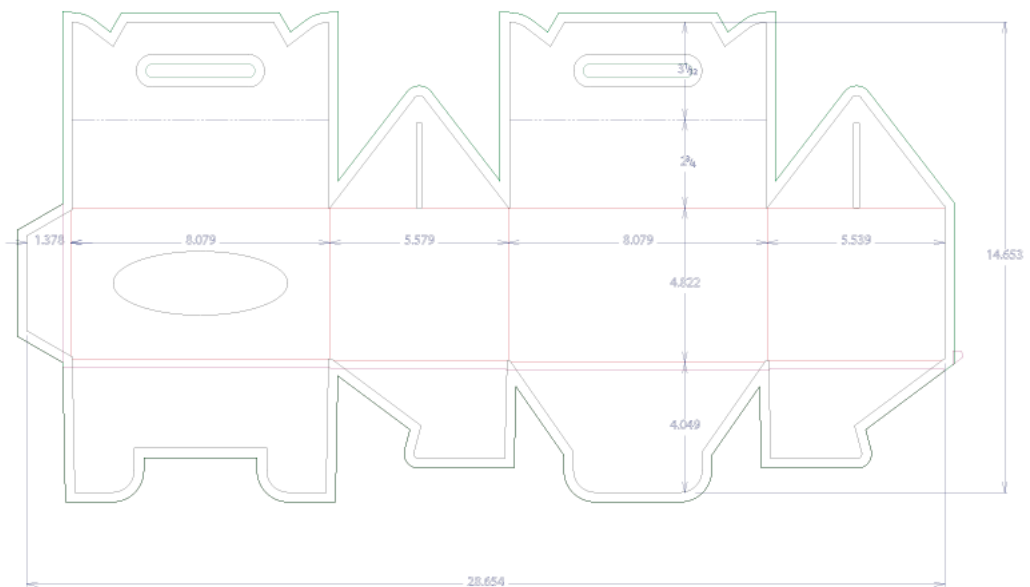
**5.** Click **Save As...**

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:

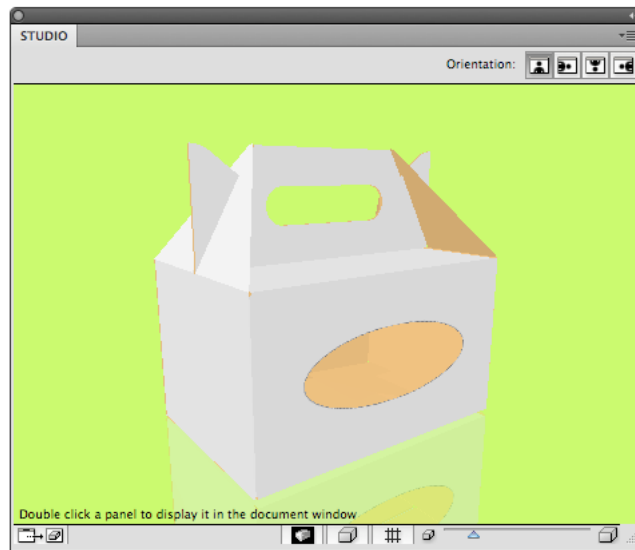


### How to modify a cutout window in an ArtiosCAD file?

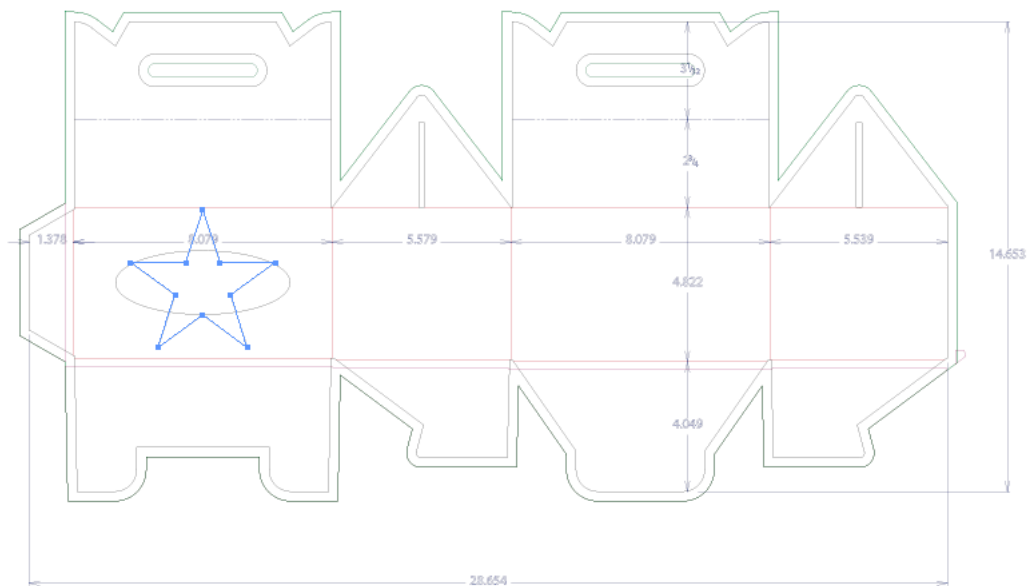
1. Open or Place an ARD file that already contains a cut-out window.



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

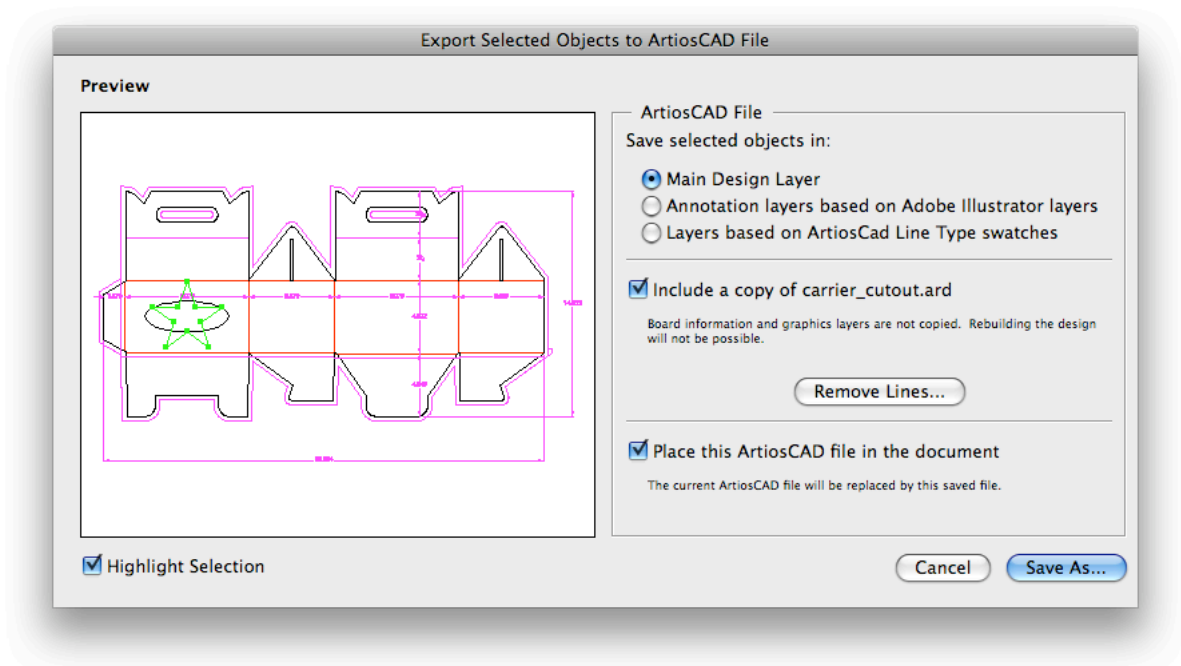


2. Create and select the new cutout shape that you want to add to the ARD file.



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

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

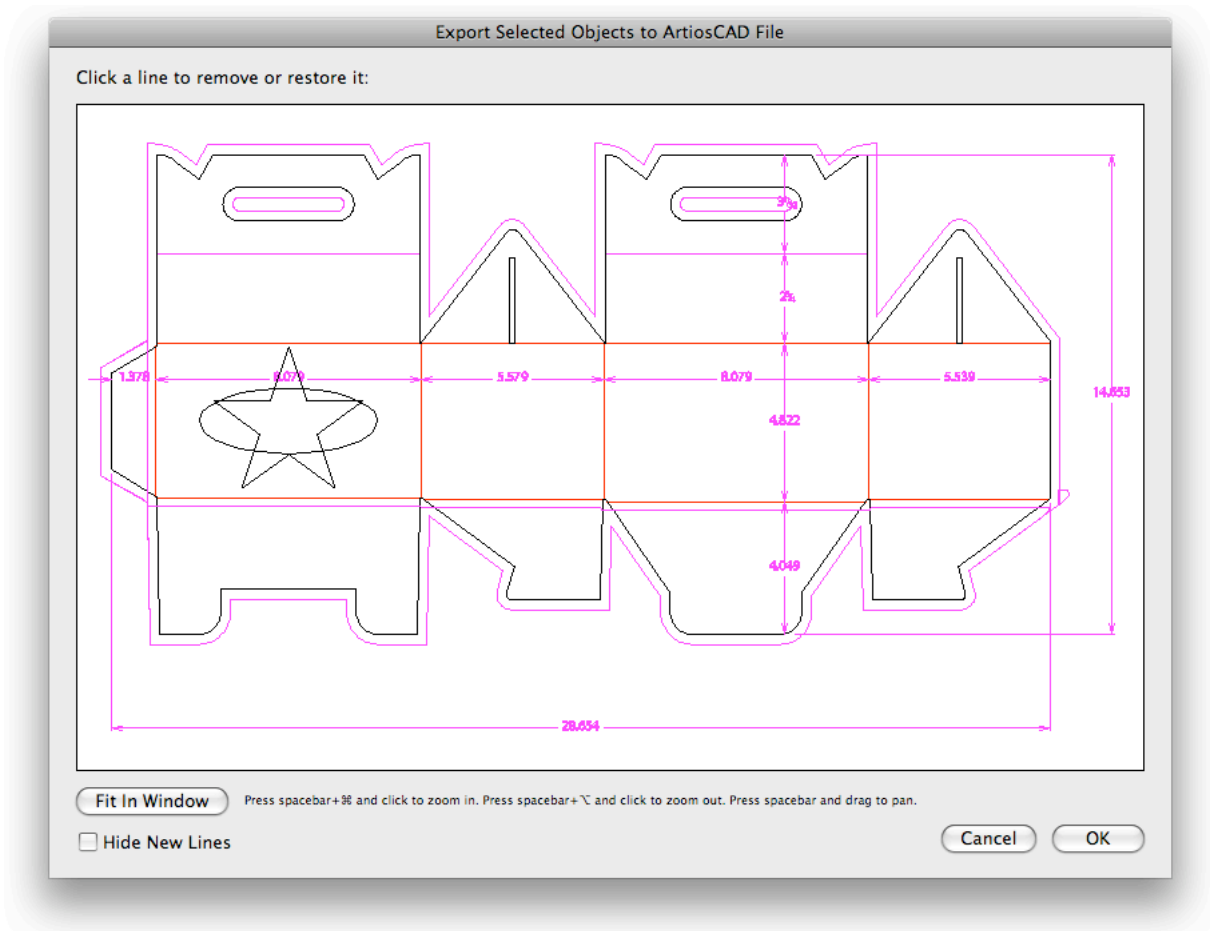


In the preview window you notice that you do not get the desired result. We need to remove the original cutout window.

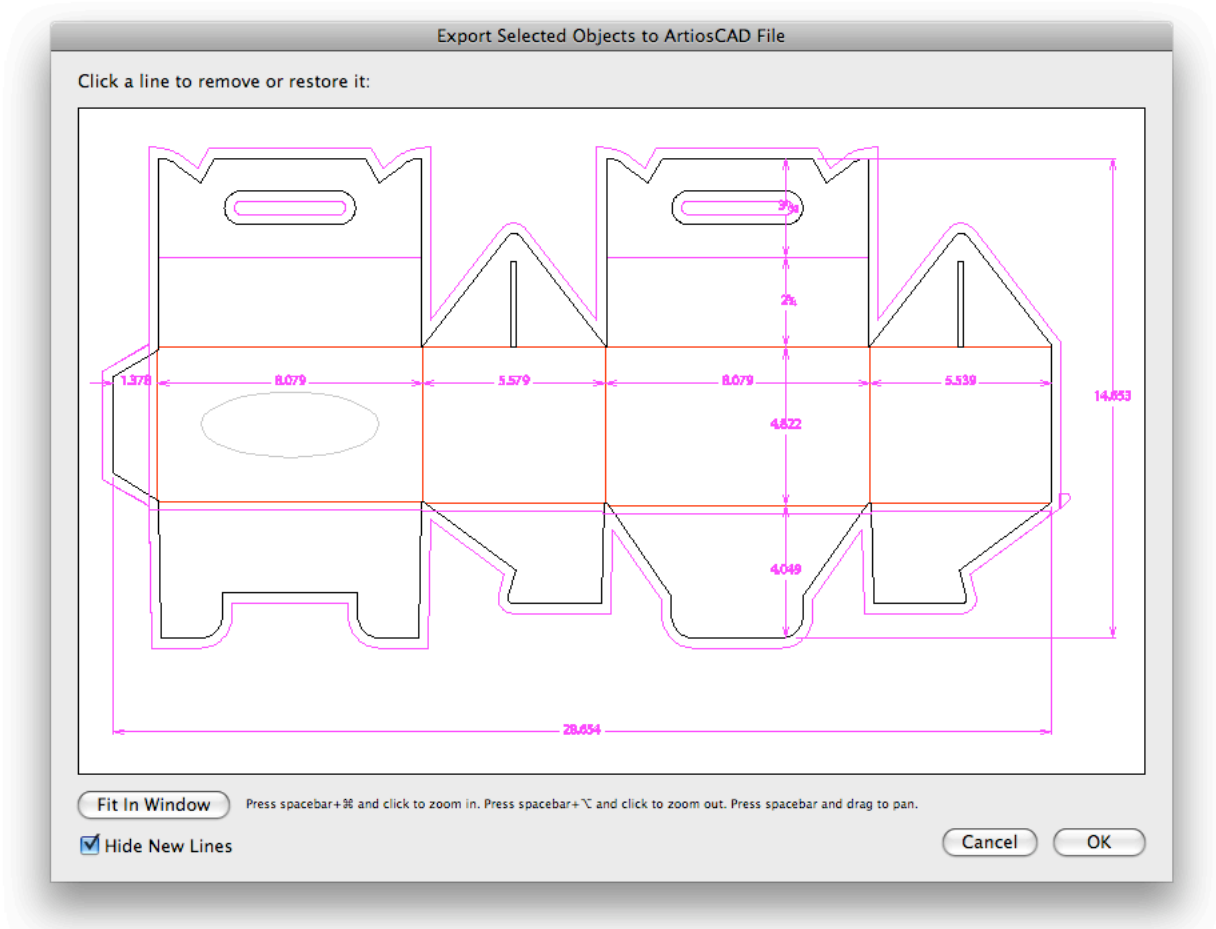
**4. Click Remove Lines.**

The **Remove Lines** dialog appears.



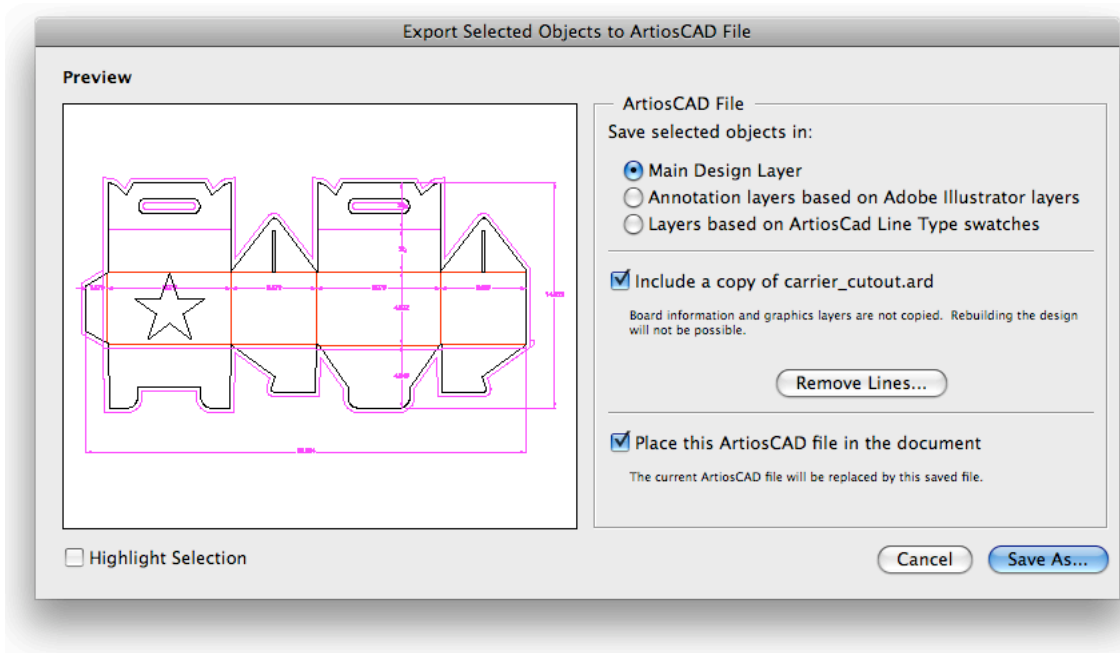


5. In this dialog, you can select the lines you would like to remove. It will not be possible to select the new lines. You can choose to hide the new lines by enabling **Hide New Lines**.
6. Click and drag a rectangle around the original cutout window.  
This window will be grayed out. This means that it will be removed in the final ARD file.



7. Click **OK**.

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



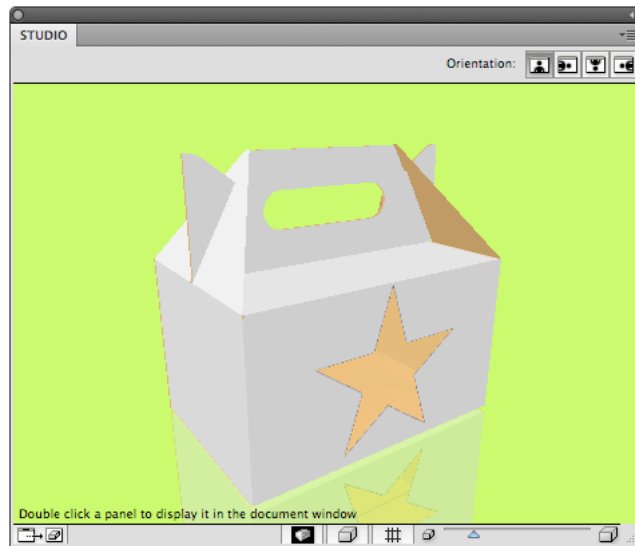
8. Click **Save As**.

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.

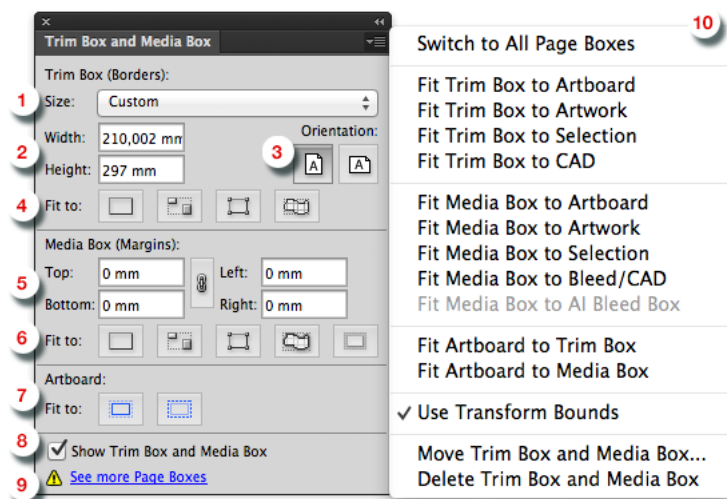
You can find the Page Box plug-in in **Window > Esko > Trim Box and Media Box**

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.

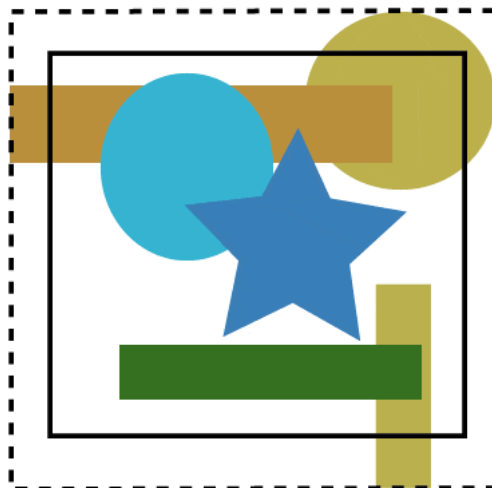
**9. See more page boxes:** In case page boxes other than Trim and Media box are defined, this link will open the **All Page Boxes** version of the palette. See [All Page Boxes](#) on page 79

**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:

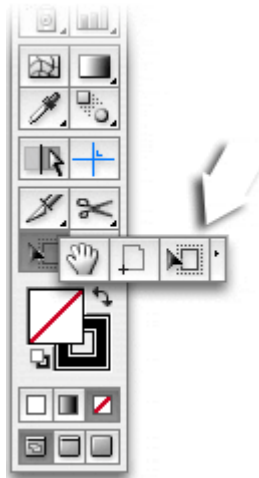


### Moving and Scaling Trim Box and Media Box

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

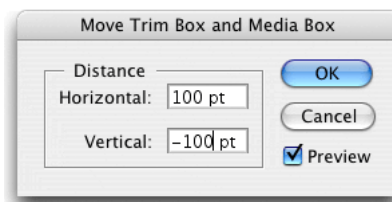
- Select the Trim and Media Box Tool from the AI tool palette.  
Use the Trim and Media Box to click and drag the Trim and Media Box.
- Select the Trim and Media Box Tool from the AI tool palette.
  - ALT + drag = scale from the center out
  - SHIFT + drag = constrained scaling

- 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

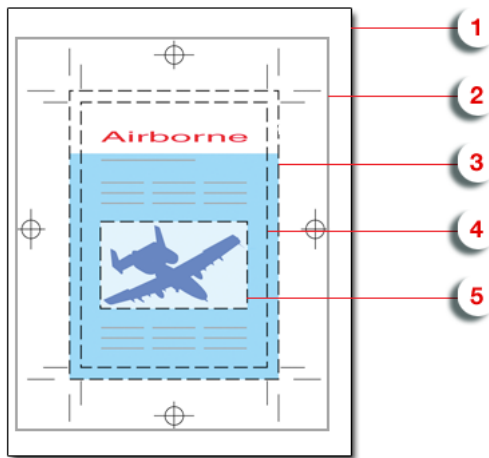
- You could use one of the "fit to" options (to Artboard, artwork, selection, cad or crop area).

**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

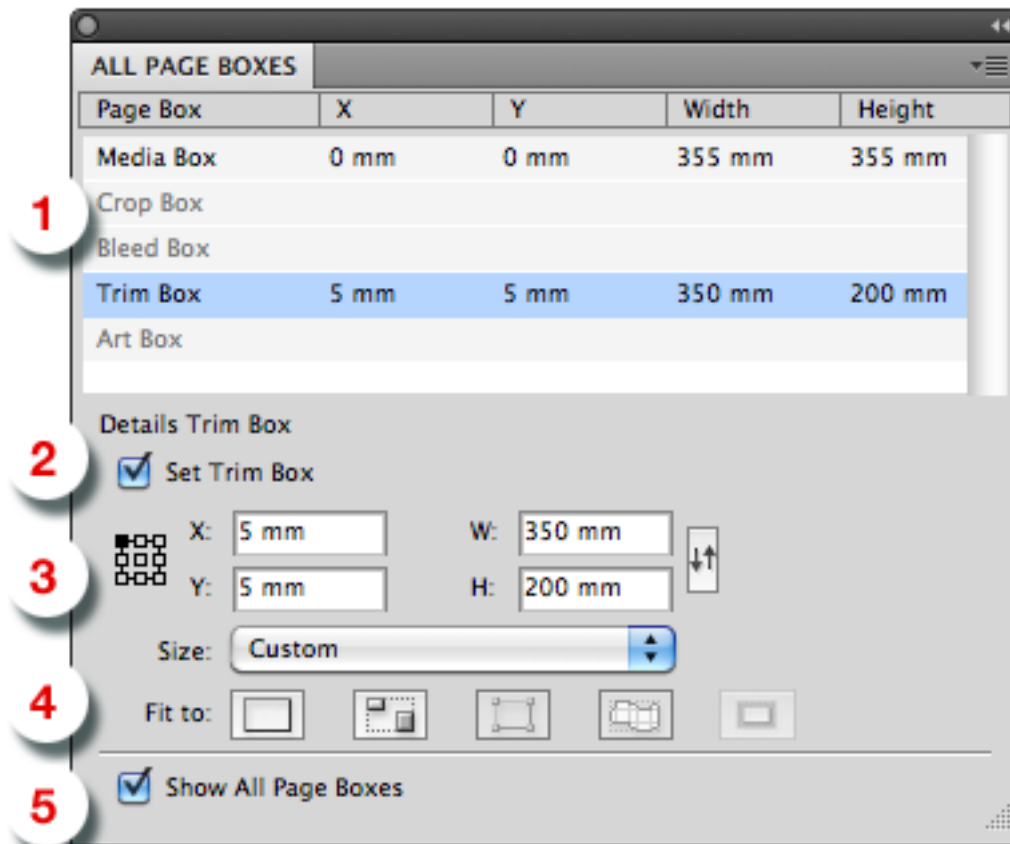


1. Media box: this is the page format
2. Crop box: includes the Bleed box and all marks.
3. Bleed box: defines the trimmed page plus the bleed.
4. Trim box: this is the net document format.
5. Art box: the Art box can be used to specify any section of the page.

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 height. 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.






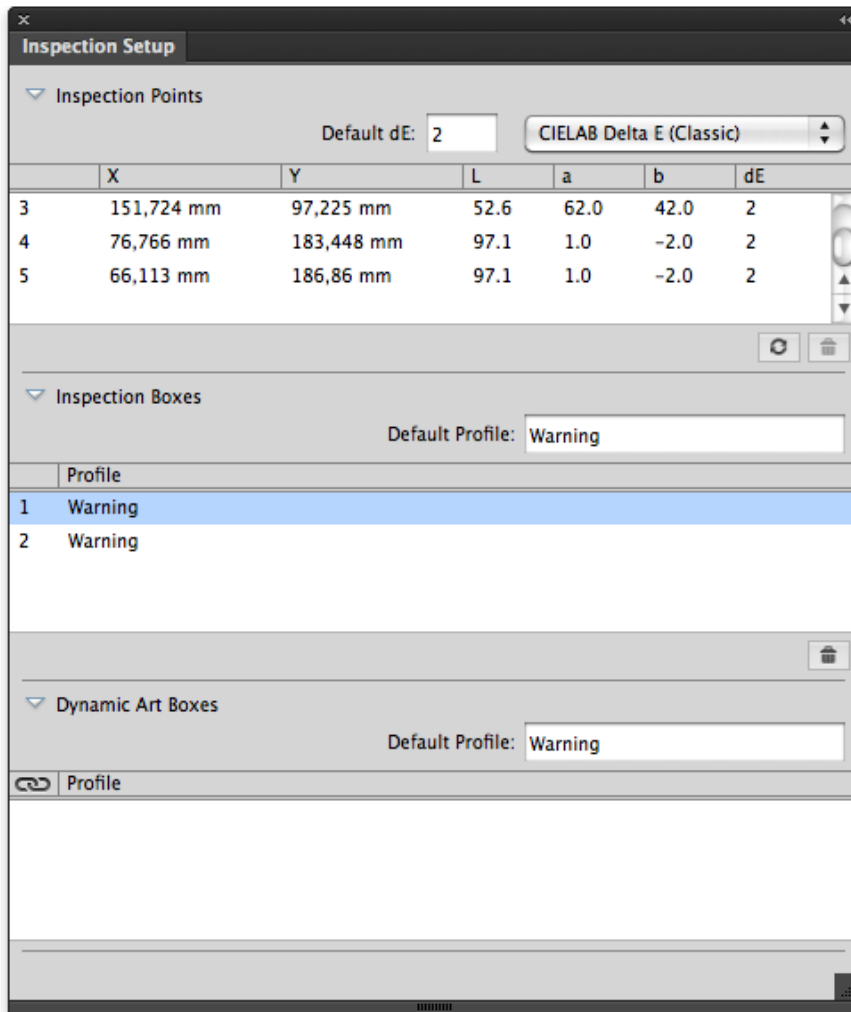
### 3.6. The Inspection Setup Plug-In

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.

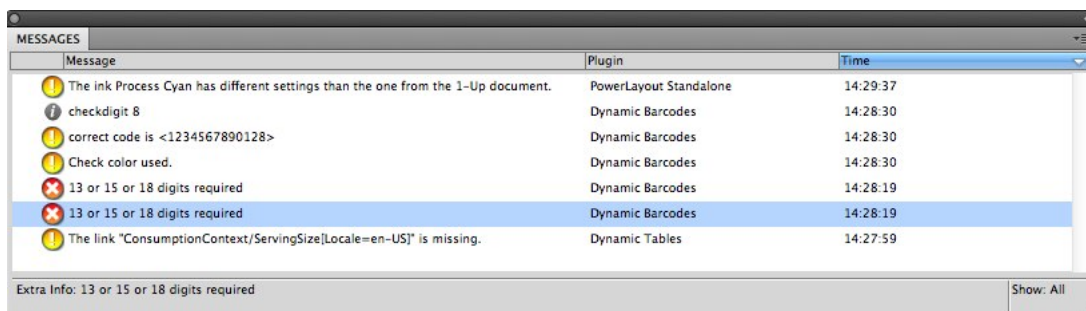
It displays the information, warnings and errors from all the other DeskPack plug-ins, and tells you which plug-in generated them.

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**.



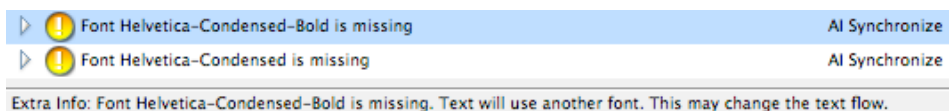
This palette shows you:

- 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.

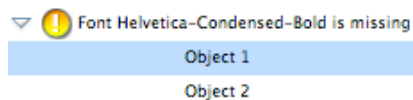
**Tip:** You can click the column headers to sort the messages, and drag the columns horizontally to adjust their widths.

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.

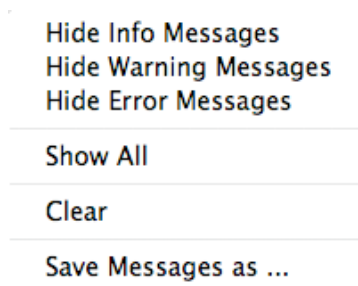


- click one of the objects in the list to select it in the file.
- double-click that object to select it and zoom in on it in the file.
- double-click the message to select and zoom in on all objects it relates to in the file.

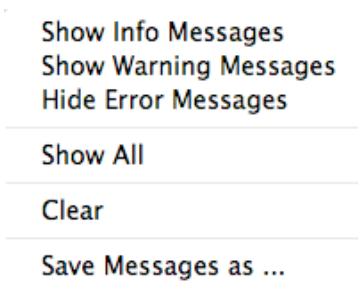
### 3.7.2. Filtering the Messages

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**.

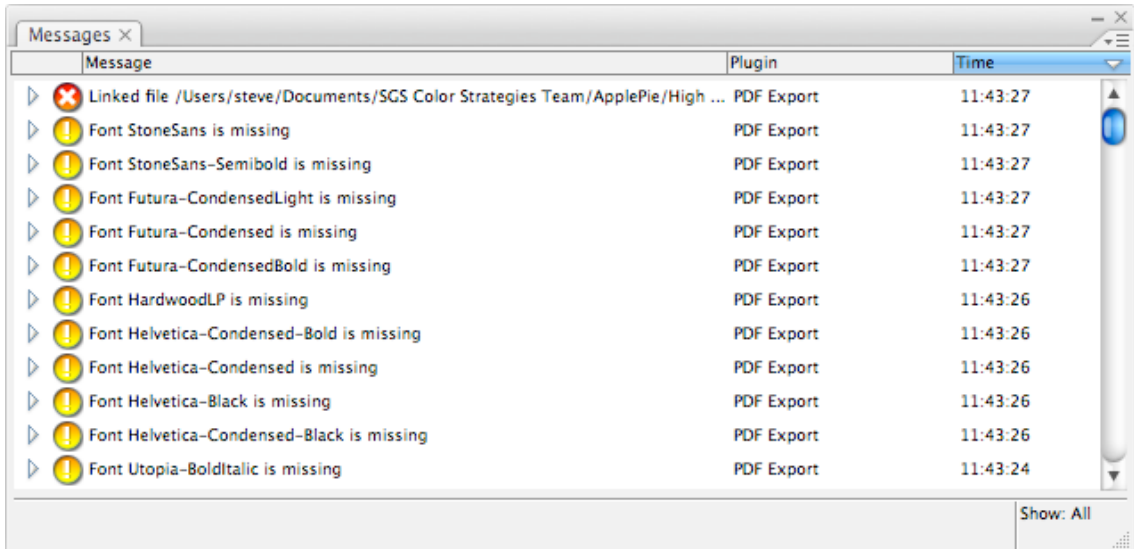


- To show them again, select either:
  - **Show Info Messages**,
  - **Show Warning Messages**,
  - **Show Error Messages**.

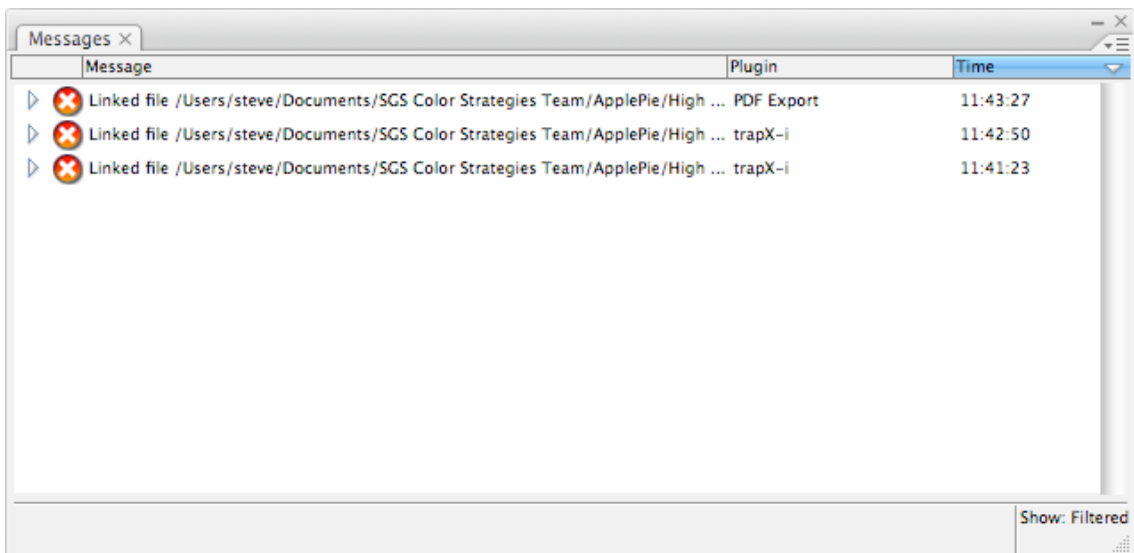


- To only show the last message, select **Show Last** in the fly-out menu.
- To show all messages again, select **Show All**.

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

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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.

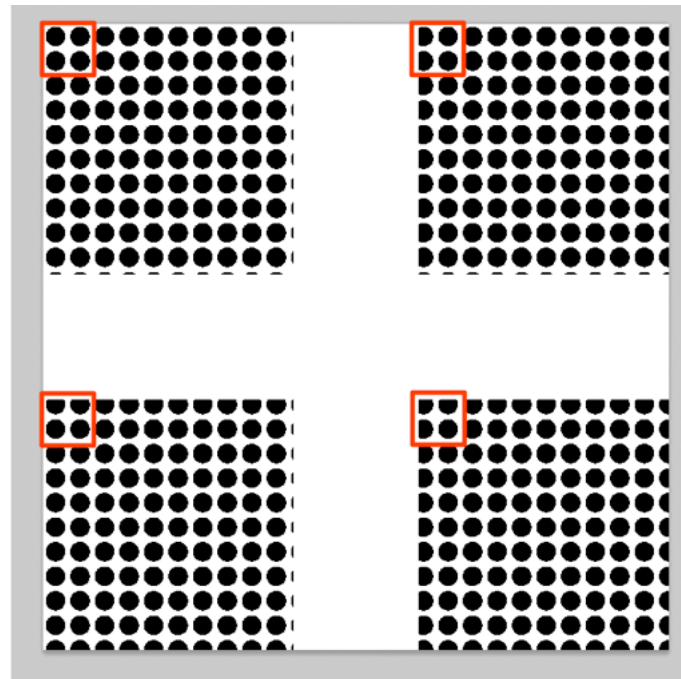
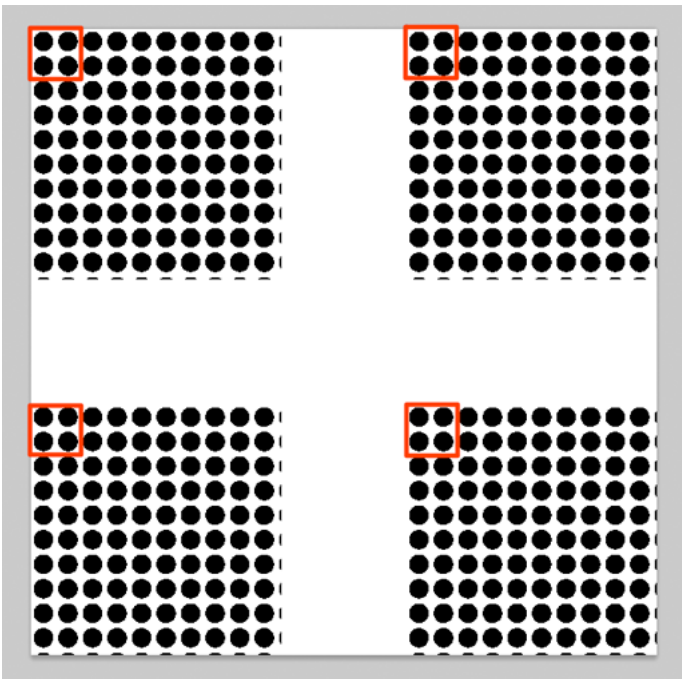
Values for vertical and horizontal distortion is limited to 90% - 110%.

### 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

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With the **Annotations** plugin, you can view .xpdf 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 .xpdf file, highlighting the found errors and problems on the document.

The .xpdf 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 .xpdf file in the following locations, in the specific order shown below.

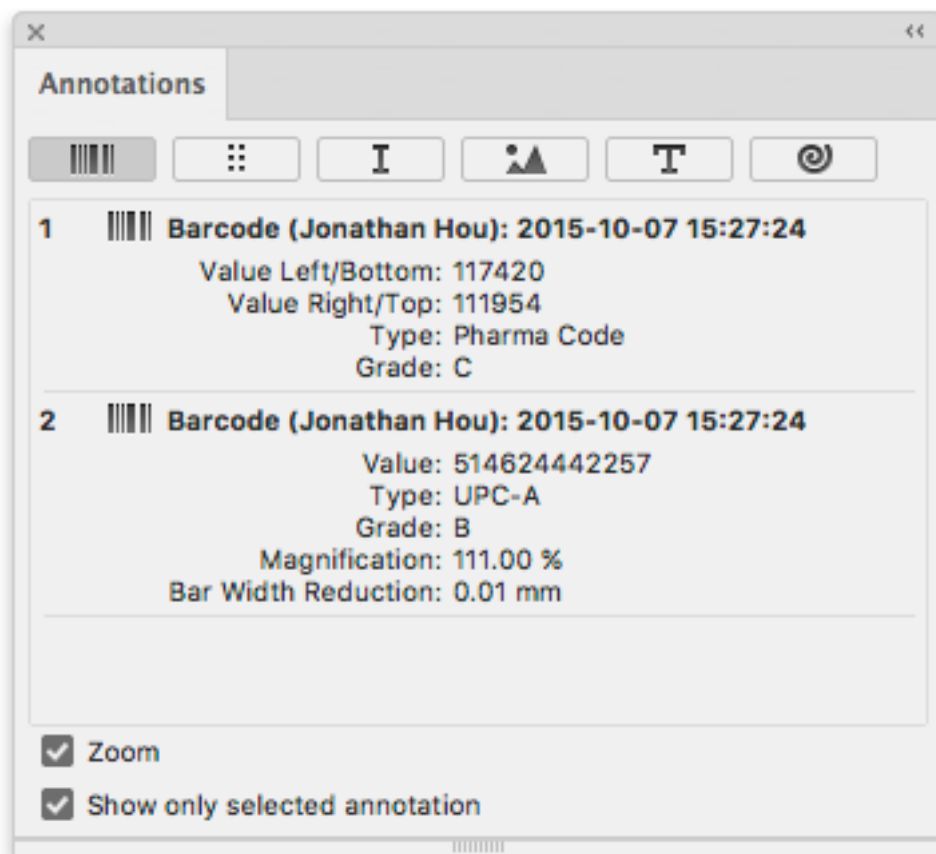
1. `.view/sample.pdf/*.xpdf`



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.

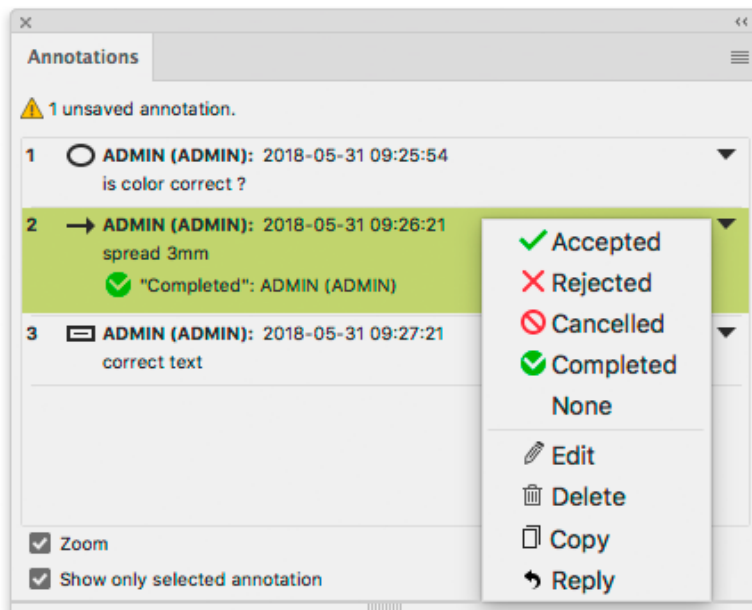
**Note:** Multi-page annotations is not supported for WebCenter annotations

### 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

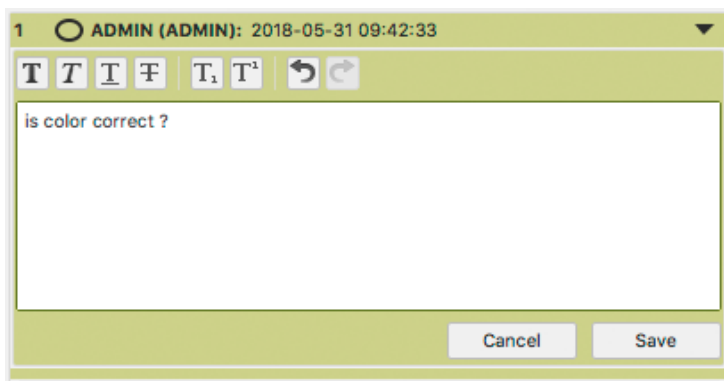
For every annotation (or reply), you can use the dropdown menu to modify the annotation.



- 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.

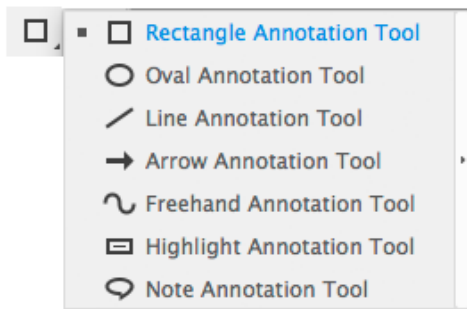
**Note:** You can only reply to an annotation, not to a reply.

- 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

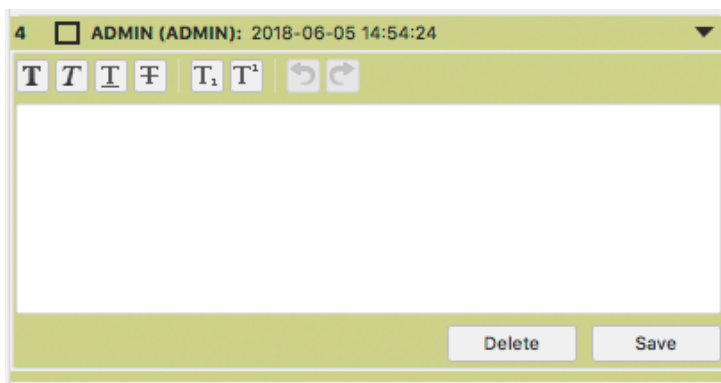
### 3.9.5. Creating new annotations using the Annotation Tool

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

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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. DeskPack Trapper

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### 4.1. Introduction to DeskPack Trapper for Adobe Illustrator

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If you install PowerTrapper Client, PowerTrapper for Adobe Illustrator or Instant Trapper for Adobe Illustrator version 18.1 or higher, DeskPack Trapper for Adobe Illustrator is installed as well, using the same license.

**Note:** Automatic Trapping in the DeskPack Trapper for Adobe Illustrator is only available if you have a PowerTrapper Client or PowerTrapper for Adobe Illustrator license.

DeskPack Trapper for Adobe Illustrator offers the same trapping engine and functionality as the Trapping function in Esko's ArtPro+ editor, within Adobe Illustrator.

There are two trapping modes: **Trapping** and **Reverse Trapping**.

**Trapping** will extend the lightest color into the darkest, to avoid white lines in case of misregistration. See [Trapping mode: Trapping](#) on page 96

**Reverse trapping** will generate white lines, to avoid colors touching or overlapping in case of misregistration. This is useful to prepare a job for Dry Offset printing (e.g. metal beverage cans) where overprinting of inks is not allowed as the inks would contaminate each other on the blanket. See [Trapping Mode: Reverse Trapping](#) on page 105

If you have a PowerTrapper Client license, the Trapping task can be launched and executed on an Automation Engine server version 18.1.1 or higher. See [Trapping on Server](#) on page 109

#### 4.1.1. What is Trapping?

The trapping process is a safeguard against possible (even likely) fluctuations in the printing process.

Minor discrepancies in registration, slight paper shifting or stretching of e.g. PE foil can cause inks to misregister. When two adjoining colored objects do not meet exactly, you can end up with a printed result like the one below:



The overlap creates a dark area and the gaps cause an undesirable light area. To prevent these potential discrepancies, a trap can be added, causing the original colors to slightly overlap each other:



In general trapping is necessary when:

- The two colors each consist of at least one ink but they have no common inks.
- The two colors have one or more common inks, but the percentages of those common inks are significantly different in the two colors (for example a color made of 50% M and 10% C will be trapped with a color made of 50% Y and 80% C).

Placing a fine line where the colors join, made of a color that contains components of both adjoining colors, can trap such areas effectively.

## 4.2. Trapping mode: Trapping

Using **Automatic Trapping**, you can create a special **Automatic Trapping** layer. See [Automatic Trapping](#) on page 96

You can also manually create all Traps, using Manual Trapping. See [Manual Trapping](#) on page 98

### 4.2.1. Automatic Trapping

This is a typical Automatic Trapping workflow:

1. Set up your document to be trapped.
2. Set the general trapping settings, and generate the **Automatic Trap Layer**. See [Starting Automatic Trapping](#) on page 97



**Attention:** A file can not contain both an Automatic Trap Layer and a Reverse Trap Layer. Creating an Automatic Trap Layer will remove an earlier created Reverse Trap Layer.

3. Make any changes necessary
  - You can change the general trapping settings
  - You can add a **Trap Tag** to one or more objects, to overwrite the general trapping settings for those objects. See [Working with Trap Tags](#) on page 107

**Note:** You can also add Trap Tags before you start Automatic Trapping.

- You can still modify your document, e.g. remove, move or add objects



Any of these changes will result in the Trapping Layer to be **out of sync**. To continue, update the Trap Layer. See [Updating the Automatic Trap Layer](#) on page 98

- Using Trap Tags and updating the Automatic Trap Layer you can finetune the trapping to your liking. However, if you prefer to manually tweak certain traps, you can do so by expanding the Automatic Trap Layer and manually edit the traps. See [Edit and expand](#) on page 98.



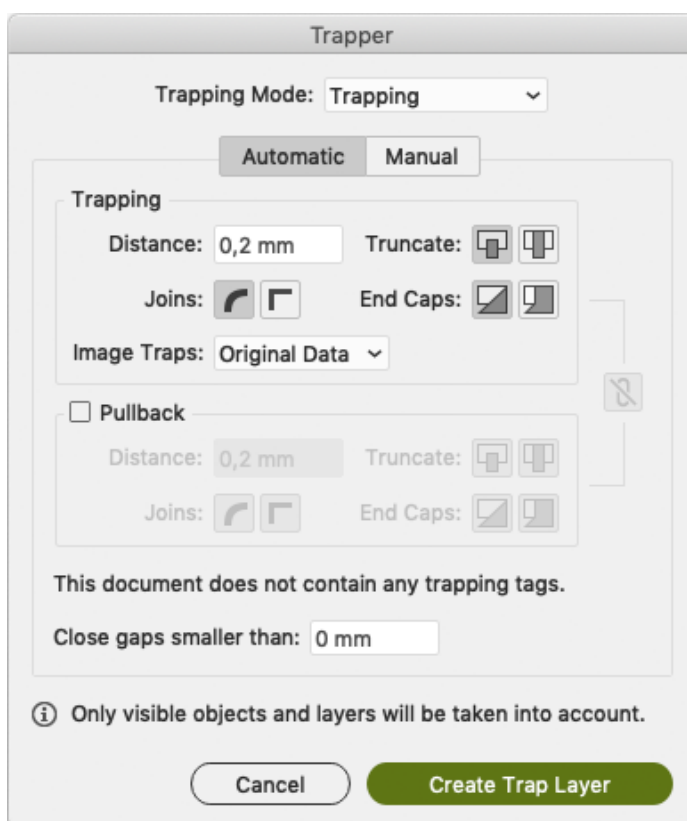
**Warning:** If you expand the Automatic Trap layer, it is no longer a special "Automatic Trap" layer: you will no longer be able to update it.

## Starting Automatic Trapping

To start Automatic Trapping:

- Open the document you want to trap
- Open the Trapping dialog by choosing **Window > Esko > Trapper > Trapper...**
- Set the **Trapping Mode** to **Trapping**

The **Automatic** tab will be selected by default.



The Trapping dialog will indicate how many objects have a Trap Tag set. See [Working with Trap Tags](#) on page 107

- Set the Trapping and Pullback Settings to be used. For more information on the Trapping / Pullback settings, see [Trapping / Pullback Settings](#) on page 101

5. Define the size of **Gaps** you want to automatically close, and click **Create Trap Layer**

**Note:** If your document already contains an Automatic Trap Layer, the button will show **Update Trap Layer**. See [Updating the Automatic Trap Layer](#) on page 98

A new layer "Automatic Trap Layer" is created in the Layers list. It will contain all trapping objects.



**Attention:** A file can not contain both an Automatic Trap Layer and a Reverse Trap Layer. Creating an Automatic Trap Layer will remove an earlier created Reverse Trap Layer.

Automatic Trapping takes into account all **visible** objects. Processing steps will not be taken into account.

### Updating the Automatic Trap Layer

Any change to the document or trap settings will result in the Trapping Layer being **out of sync**. Updating it will recalculate the Automatic Trap Layer.

There are different ways to update the Trap Layer:

- Choose **Window > Esko > Trapper > Update Trap Layer**
- Use its shortcut **Cmd+Alt+Shift+4** (Mac) or **Ctrl+Alt+Shift+4** (Windows)
- Open the Trapping dialog and click **Update Trap Layer**

All traps will be updated, and the Automatic Trap layer will be in sync again.

### Edit and expand

If Automatic Trapping in combination with Trap Tags still doesn't get you the result you want, you can expand the Automatic Trap Layer and manually edit the traps.



**Warning:** If you expand the Automatic Trap layer, it is no longer a special "Automatic Trap" layer: you will no longer be able to update it.

1. Open the Trapping dialog by choosing **Window > Esko > Trapper > Trapper...**
2. Select the **Manual** tab
3. Enable **Edit and Expand Automatic Trap Layer**
4. Click the **Enter Trapping Mode** button.

If the Automatic Trap Layer is out of sync, it will first be updated. See [Updating the Automatic Trap Layer](#) on page 98

The Automatic Trap Layer will become a regular layer, and you will enter **Trapping Mode** as when using Manual Trapping. You can use the Manual Trapping tools to modify or create traps. See [Manual Trapping](#) on page 98

## 4.2.2. Manual Trapping

Using the Trapping tool, you can add traps. Manual trapping works on all **visible** objects.

1. Open the Trapping dialog by choosing **Window > Esko > Trapper > Trapper...**
2. Select the **Manual** tab.
3. Select **Add a New Layer**

- Define the size of **Gaps** you want to automatically close, and click **Enter Trapping Mode**.

This will open your document in a separate Trapper window. See [The Trapper workspace](#) on page 99

- In the Trapper window, you have different tools available from the bottom of the window to create your traps.

- The **Trap** tool  and **Trap Similar** tool , shortcut **T**. See [Trapping tool](#) on page 102

- The **Pullback**  and **Pullback Similar** tool , shortcut **P**. See [Pullback tool](#) on page 102

- The **Trap + Pullback**  and **Trap + Pullback Similar** tool , shortcut **B**. See [Trap and Pullback tool](#) on page 103

- If you are done creating traps, you can click the **OK** button to exit Trapping mode.







Trap objects will use a **Darken** blend mode, and are placed in a layer "Trap Layer x".

### The Trapper workspace

When you click the **Enter Trapping Mode** button, the current document is opened in the Trapper window. This is a modal window, meaning that you can only continue working in Adobe Illustrator after closing this window, either by accepting (OK) or canceling (Cancel) the traps.



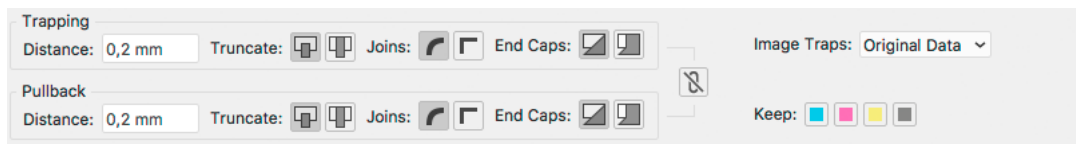
1.	Working area	The main section shows the document, initially using the same zoom as when starting the trapping session.
2.	Layers	All layers are grouped in one single layer named "Artwork". Trap objects are placed in a "Trapping

		Objects" layer. You can change the visibility of a layer by clicking the eye icon.
3.	Separations	<p>The <b>Separations</b> section shows all separations in the document. Using the eye icons, you can change the visibility. If only one separation is visible, the buttons on top can set the single separation preview:</p> <ol style="list-style-type: none"> <li>1. Color: the single separation is shown in its own color</li> <li>2. Positive film: the single separation is shown in black</li> <li>3. Negative film: the single separation is shown in black, but negative.</li> </ol> <p>When using the Densitometer tool, the measured values are shown here too. See <a href="#">Densitometer tool</a> on page 104</p>
4.	Quality Control	Using the <b>Quality Control</b> you can get a preview of the possible effect of registration errors. See <a href="#">Quality Control: Registration Errors</a> on page 105
5.	Info	<p>The <b>Info</b> section gives some information on how to use the Trapping Tools. It also shows the <b>Close Small Gaps</b> value that was used when starting the trapping session.</p> <p><b>Note:</b> To change this value, close the Trapping dialog and start a new trap session.</p>
6.	Trapping & Pullback Settings	See <a href="#">Trapping / Pullback Settings</a> on page 101. You can hide or show the settings using the <b>Hide Options / Show Options</b> button or using the shortcut <b>O</b> .
7.	Toolbar	The toolbar contains different tools to change the zoom. See <a href="#">Zoom and Pan</a> on page 104. It also contains the Densitometer tool (see <a href="#">Densitometer tool</a> on page 104) and the Measure tool (see <a href="#">Measure tool</a> on page 104)
8.	Trapping tools	<ol style="list-style-type: none"> <li>1. The <b>Trap</b> tool  and <b>Trap Similar</b> tool , shortcut <b>T</b>. See <a href="#">Trapping tool</a> on page 102</li> <li>2. The <b>Pullback</b> tool  and <b>Pullback Similar</b> tool , shortcut <b>P</b>. See <a href="#">Pullback tool</a> on page 102</li> <li>3. The <b>Trap + Pullback</b> tool  and <b>Trap + Pullback Similar</b> tool , shortcut <b>B</b>. See <a href="#">Trap and Pullback tool</a> on page 103</li> </ol>
9.	OK / Cancel	Click <b>OK</b> to accept all traps and close the Trap session.

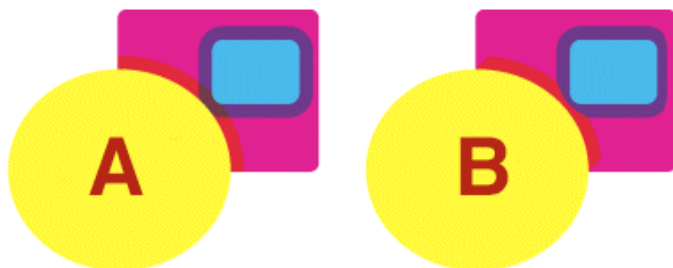
Click **Cancel** to close the Trap session without adding the traps.

### Trapping / Pullback Settings

When in Trapping mode, you can set the Trapping and/or Pullback settings at the bottom of the workspace.



- **Distance:** the size for the trap. Enter a number to use the default unit, or add the unit and it will be converted to the default unit.
- **Truncate:** DeskPack Trapper can truncate the trap so that it doesn't stick out on another color. There are two truncation modes:
  - **On Edge (A):** when a portion of a trap comes too close to the contour of another object, it is truncated on the other object's edge.
  - **On Center (B):** when a portion of a trap comes too close to the contour of another object, DeskPack Trapper limits it to half the distance between the trapped object and the other object.



- **Joins:**
  - A **Mitered** corner closes in one point. A Miter limit of 4 is used. This means the corner will be cut off at a distance of 4 times the trapping distance.
  - A **Rounded** corner joins the corners with a circular arc with the diameter equal to the trapping width.
- **End Caps:** This option specifies how to shape the ends of an open trap.
  - **Square:** this option ends the trap at right angle to the adjoining object.
  - **Round :** this rounds the ends of the trap. This option is typically only used in combination with white knockout (reverse trapping).
- **Keep:** the color(s) that will be kept (i.e. not pulled back) when applying a pullback. Click to select, click again to deselect a color.
- If the **Link** option is enabled, Trapping and Pullback parameters are kept the same.

**Note:** When you click **OK**, the settings you used are stored in the Esko Preferences, and will be entered when you start a new trapping session.

### Trapping tool

The **Trap** tool allows to create traps from one object to another.

Using the **Trap Similar** tool applies the trap to the edge you selected, but also to all edges of the same color combination. You can temporarily switch to the Trap Similar tool by holding the Shift key.

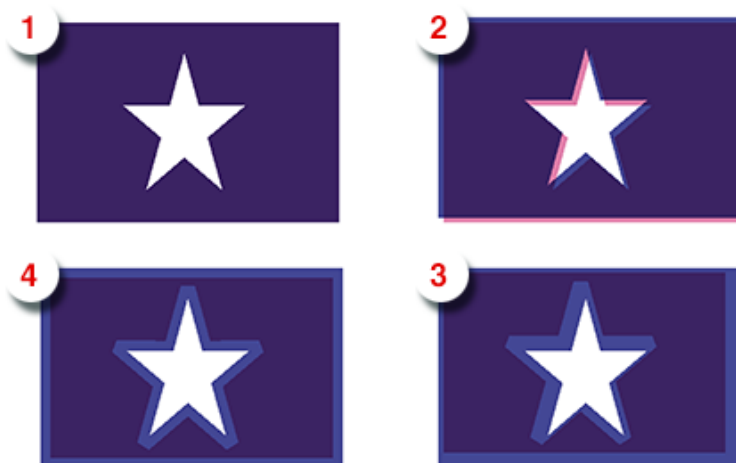
The shortcut **T** will toggle between Trap and Trap Similar.

- Click and drag from one area to a neighbouring area to create a trap.
- Click and drag in the opposite direction to change the direction of a trap. You don't need to remove it first.
- After changing the Trapping Settings, you can click and drag over an existing trap again to apply the new settings.
- Hold the ALT key to remove a trap. The cursor will change to a cross. Click and drag over an existing trap to remove it.

### Pullback tool

The **Pullback** tool allows to create pullbacks. An ink pull back keeps away all but the darkest ink of a color area composed of multiple inks that borders to a very light background. It prevents individual inks from the composed color to become visible on the background due to registration errors during the printing process. Ink pull backs are also known as "Cutbacks" or "Keepaways".

The example below shows an object with 100% dark blue and 50% magenta on an empty background (1). If misregistration occurs, a magenta line might be visible (2). 50% magenta is pulled back and a fine line of 100% dark blue remains (3). In this case, misregistration will not cause any magenta lines (4). The color that remains (dark blue) is the **Keep** ink.



Using the **Pullback Similar** tool applies the pullback to the edge you selected, but also to all edges of the same color combination. You can temporarily switch to the Pullback Similar tool by holding the Shift key.

The shortcut **P** will toggle between Pullback and Pullback Similar.

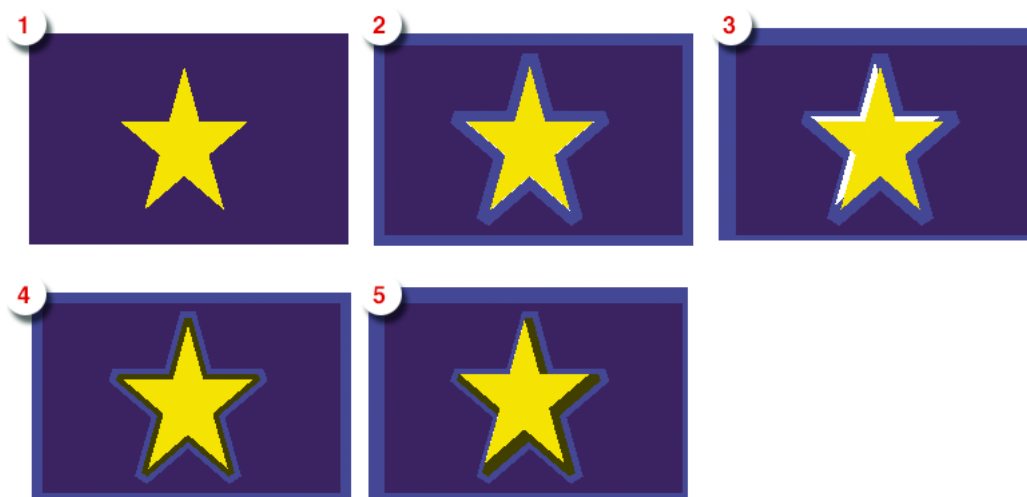
- Set the **Keep** ink(s) (i.e. the ink that is not pulled back) in the Pullback Settings by selecting the ink(s) you want to keep. You can also press **K** to open a separate Keep Color selector.
- Click and drag from one area to a neighbouring area to create a pullback.
- After changing the Pullback Settings, you can click and drag over an existing trap again to apply the new settings.
- Hold the ALT key to remove a pullback. The cursor will change to a cross. Click and drag over an existing pullback to remove it.

In case the "rich" color touches a colored background (e.g. yellow), it is advised to use **Trap and Pullback**. See [Trap and Pullback tool](#) on page 103

### Trap and Pullback tool

The **Trap and Pullback** tool allows to create pullbacks and a trap in the same pass.

A normal pullback keeps away all but the darkest ink of a color area composed of multiple inks. However, if this "rich" color borders another (light) color (1), the pullback will pull back the other colors (2). In case of misregistration of the dark blue, a white line might become visible (3). **Trap and Pullback** will pull back all inks except the Keep ink, and trap the light color in the pullback (4), so that no white lines can be seen in case of misregistration. (5)



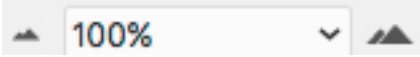

Using the **Trap and Pullback Similar** tool applies the trap and pullback to the edge you selected, but also to all edges of the same color combination. You can temporarily switch to the Trap and Pullback Similar tool by holding the Shift key.

The shortcut **B** will toggle between Pullback and Pullback Similar.

- Click and drag from one area to a neighbouring area to create a trap and pullback.
- After changing the Trapping or Pullback Settings, you can click and drag over an existing trap and pullback again to apply the new settings.
- Hold the ALT key to remove a trap and pullback. The cursor will change to a cross. Click and drag over an existing trap and pullback to remove it.


### Zoom and Pan

To change the zoom and pan in the Trapper window, you can use different tools:





- You can set the Zoom factor  :
  - Click the left button to Zoom out, or the right button to zoom in.
  - Select the Zoom factor you want using the dropdown.
- You can use the Zoom tool, either by clicking the button  or by using the shortcut Ctrl + Space (Windows) or Space + Cmd (Mac).
  - Click to double the zoom in on that location, or drag to zoom in on a specific area
  - Hold the Alt key and click to zoom out
- You can hold the Space bar key and drag to **pan**.

### Densitometer tool

The **Densitometer** tool can be used to measure densities at a specific location.


1. Select the Densitometer tool  or use its shortcut **Cmd+Alt+Shift** (Mac) or **Ctrl+Alt+Shift** (Windows)
2. Click the point you want to measure, or drag over the area to measure the average densities.

The **Separations** section will show a color patch of the measured color, the density for every separation, and the total density.

Separations		
	Ink Name	Density
	Process Cyan	40.0%
	Process Magenta	16.0%
	Process Yellow	35.2%
	Process Black	0.0%
		Σ 91.2%

### Measure tool

The **Measure** tool can be used to measure dimensions (distance, angle, ...).

1. Select the Measure tool 
2. Click the first point where you want to start measuring
3. Click the second point, or drag to the second point.

Underneath the Separation section, you will see:

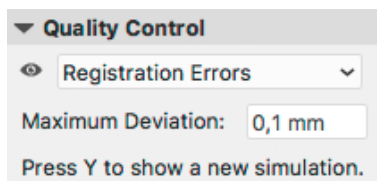


- the position of the start point in relation to the top left corner of the artboard, both horizontally (X) and vertically (Y).
- The horizontal distance or width (W) and vertical distance or height (H).
- The total distance (D) and angle (A).

### Quality Control: Registration Errors

The Registration Error Preview is a simulation of a design printed with registrations. It can be very helpful to see if trapping is applied sufficiently and correctly.

You can enable the Registration Error Preview by enabling the eye icon.



The separations are randomly shifted. In fact, all separations are moved exactly half the distance of the Maximum Deviation, but all under a random angle.

If you want to see another random registration error simulation, press **Y**.



In the example above, you can see a small area of a job in regular preview (left) and with registration errors (right). In this case, you can clearly see no trapping was applied, so white lines appear at the registration shifts.

## 4.3. Trapping Mode: Reverse Trapping

This is a typical Reverse Trapping workflow when working on a PDF+ document:

1. Set up your document to be trapped.
2. Set the general trapping settings, and generate the **Reverse Trap Layer**. See [Starting Reverse Trapping](#) on page 106



**Attention:** A file can not contain both an Automatic Trap Layer and a Reverse Trap Layer. Creating a Reverse Trap Layer will remove an earlier created Automatic Trap Layer.

3. Make any changes necessary
  - You can change the general Reverse trapping settings

- You can add a **Trap Tag** to one or more objects, to overwrite the general trapping settings for those objects. See [Working with Trap Tags](#) on page 107

**Note:** You can also add Trap Tags before you start Reverse Trapping.

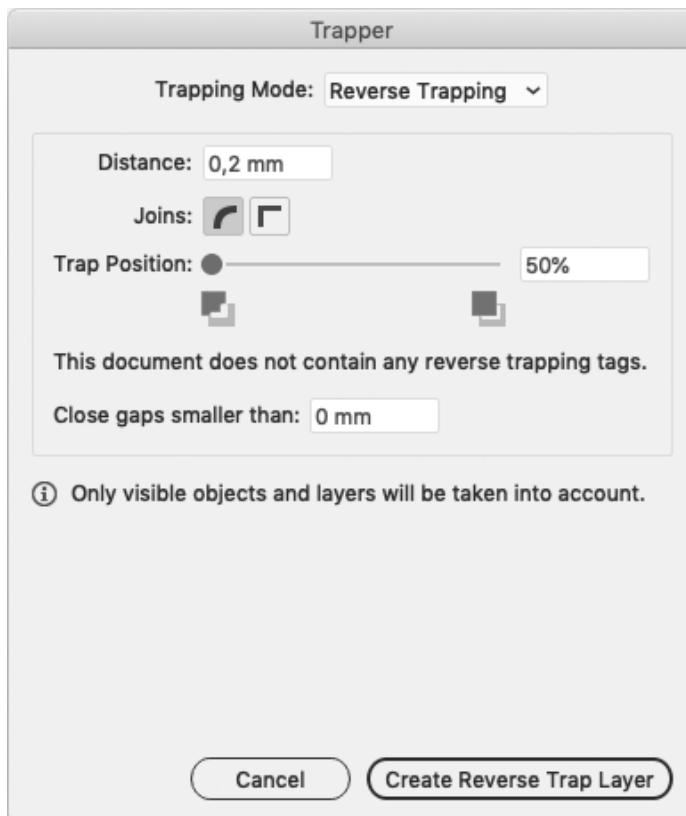
- You can still modify your document, e.g. remove, move or add objects

Any of these changes will result in the Trapping Layer to be **out of sync**. To continue, update the Trap Layer. See [Updating the Reverse Trap Layer](#) on page 107

### 4.3.1. Starting Reverse Trapping

To start Reverse Trapping:

1. Open the document you want to trap
2. Open the Trapping dialog by choosing **Window > Esko > Trapper > Trapper...**
3. Set the **Trapping Mode** to **Reverse Trapping**



The Trapping dialog will indicate how many objects have a Reverse Trap Tag set. See [Working with Trap Tags](#) on page 107

4. Set the Trapping settings to be used.
  - a) **Distance:** the size for the trap. Enter a number to use the default unit, or add the unit and it will be converted to the default unit.

- b) **Joins:** A **Mitered** corner closes in one point. A Miter limit of 4 is used. This means the corner will be cut off at a distance of 4 times the trapping distance. A **Rounded** corner joins the corners with a circular arc with the diameter equal to the trapping width.
- c) **Trap Position:** You can use the slider or manually enter a value between 50 and 100. 100% will position the Reverse Trap object completely in the selected direction (in most cases into the lightest ink). 50% will place the trapping object 50% in both directions (i.e. centered on the edge).

5. Define the size of **Gaps** you want to automatically close, and click **Create Reverse Trap Layer**

**Note:** If your document already contains a Reverse Trap Layer, the button will show **Update Reverse Trap Layer**. See [Updating the Reverse Trap Layer](#) on page 107

A new layer "Automatic Reverse Trap Layer" is created in the Layers list. It will contain all trapping objects.



**Attention:** A file can not contain both an Automatic Trap Layer and a Reverse Trap Layer. Creating a Reverse Trap Layer will remove an earlier created Automatic Trap Layer.

Reverse Trapping takes into account all **visible** objects. Processing steps will not be taken into account.

### 4.3.2. Updating the Reverse Trap Layer

Any change to the document or trap settings will result in the Reverse Trap Layer being **out of sync**. Updating it will recalculate the Reverse Trap Layer.

There are different ways to update the Reverse Trap Layer:

- Choose **Window > Esko > Trapper > Update Trap Layer**
- Use its shortcut **Cmd+Alt+Shift+4** (Mac) or **Ctrl+Alt+Shift+4** (Windows)
- Open the Trapping dialog and click **Update Reverse Trap Layer**

All traps will be updated, and the Reverse Trap layer will be in sync again.

## 4.4. Working with Trap Tags

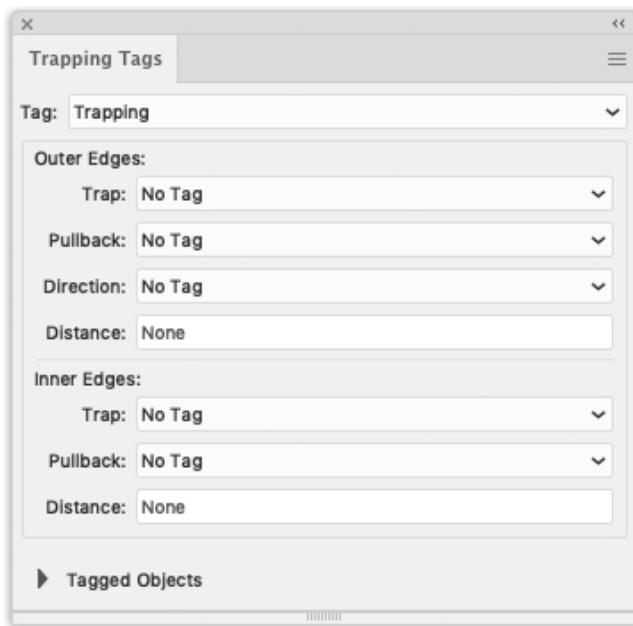
A **Trap Tag** is a property attached to a group or object and saved in your document, allowing you to overwrite the general trapping settings during Automatic Trapping or Reverse Trapping.

There are two types of Trap Tags: **Trapping Tags** are taken into account when using Automatic Trapping, while **Reverse Trapping Tags** are taken into account when using Reverse Trapping

Trap Tags can be created before starting Automatic Trapping or Reverse Trapping, or after the Trap Layer was created. In the latter case, you will have to update the Trap Layer to see the result. See [Updating the Automatic Trap Layer](#) on page 98 or [Updating the Reverse Trap Layer](#) on page 107

**Note:** Trap tags are saved in your Adobe Illustrator file, and included when saving as PDF+ file. When saving as a Normalized PDF, trap tags will not be included.

1. Select the group(s) or object(s) you want to assign a Trap Tag.
2. Open the **Trapping Tags** panel by choosing **Window > Esko > Trapper > Trapping Tags**



3. Using the **Tag** dropdown, you can select if you want to add or edit **Trapping Tags** or **Reverse Trapping Tags**.
4. Define the settings for the **Outer Edges**, i.e. edges between the selected group or object and other objects in your document
  - If set to **No Tag**, the 'default' action will be used. This can be the default trapping settings, but can also be the Trap Tag of the parent group: if e.g. a group has a Trap Tag to set **Trap** to "Always", an object within that group can have a Trap Tag to set **Trap** to "Automatic", whereas setting it to **No Tag** would apply the Trap Tag of the group.
  - Set **Trap** to decide if the edges should **Always** be trapped, **Never** be trapped, or **Automatic** to let DeskPack Trapper decide.
  - Set **Pullback** (Trapping Tag only) to decide if the edges should **Always** be pulled back, **Never** be pulled back, or **Automatic** to let DeskPack Trapper decide.
  - Set **Direction** to decide if the edges should always be trapped **Inwards**, **Outwards** or **Automatic**, to let DeskPack Trapper decide.
  - Enable **Distance** to set a fixed distance for the traps.
  - Set the **Trap Position** (Reverse Trapping Tag only) to set the position of the Trap by entering a value between 50 and 100. 100% will position the Reverse Trap object completely in the selected direction (mostly into the lightest ink). 50% will place the trapping object 50% in both directions (i.e. centered on the edge)

**Note:** You can remove a trapping tag setting by setting the dropdown to "No Tag". For distance, you remove it by clearing the input field.

5. Define the settings for the **Inner Edges**, i.e. edges within the group or object. This can be e.g. two adjacent objects in the same group, or the stroke and fill of a single object)

In the **Tagged Objects** section, you can get an overview of all objects with Trap Tags or Reverse Trap Tags, depending on the **Tag** dropdown. Clicking an entry in the list will select the corresponding object, and show the Trap Tag settings in the panel.

**Note:** You can remove all Tags (Trapping Tags **and** Reverse Trapping Tags) from your document by choosing **Clear All Tags** in the fly-out menu of the Trapping Tags panel.

Changing a Trap Tag will result in the Trapping Layer being **out of sync**. To continue, update the Trap Layer. See [Updating the Automatic Trap Layer](#) on page 98 or [Updating the Reverse Trap Layer](#) on page 107

## 4.5. Trapping on Server

By sending Trap Tasks to an Automation Engine, you can free up Adobe Illustrator for other jobs.

**Note:** Trapping on Server requires a PowerTrapper Client license.

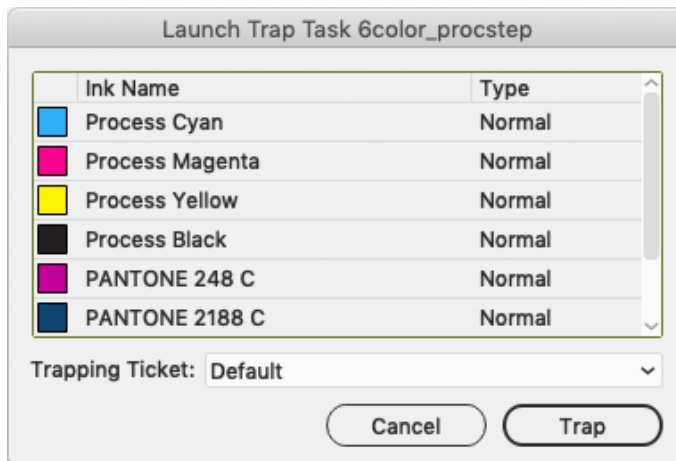
The concept:

1. Open the Adobe Illustrator file, and click **Window > Esko > Trapper > Launch Trap Task...**



**Important:** Trapping on Server is only available when working in PDF+ Mode. For more information on PDF+ Mode and PDF+ in general, we refer to the **Ink Manager** chapter of the **Esko Data Exchange** documentation: <https://www.esko.com/en/support/product?id=Esko%20Data%20Exchange%20for%20Adobe%20Illustrator>

2. Choose a Trapping Ticket and click **Launch**



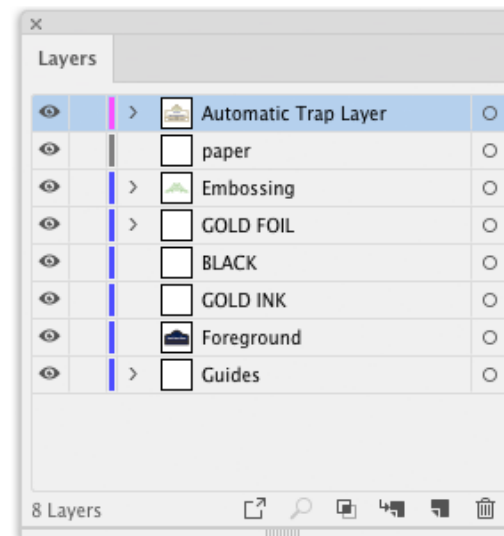
3. The Illustrator file is saved locally to reflect the latest changes
4. The file is copied to the Server, and is trapped with the selected ticket.



5. Adobe Illustrator is freed up for other jobs, while the Shuttle palette monitors the progression of the trapping
6. The Server generates trap objects and saves them in a separate Trap Layer



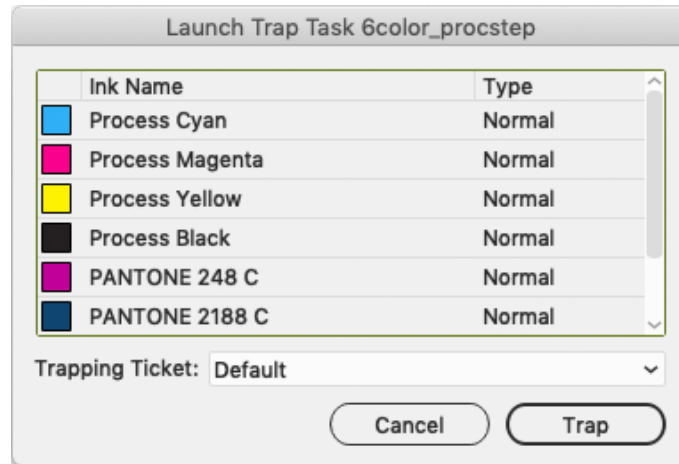
7. Once finished, you open the file by double-clicking the task in the Shuttle window, and the Trap layer is automatically placed on top of the artwork layers.




#### 4.5.1. The Trapping on Server Workflow

1. To start trapping the current AI file, select **Window > Esko > Trapper > Launch Trap Task...** The **Launch Trap Task** Window opens.

2. Check the **ink options**. DeskPack Trapper supports spot colors or opaque inks. To change the Ink Options, use the Ink Manager palette.
3. Select the **Trapping Ticket**. The list presents all Trap Tickets stored centrally on the Automation Engine Server.



4. Click **Trap**
  - a) First the AI file is overwritten in native AI format at its original location (in order to include all the latest changes!)
  - b) Secondly, it is also saved as an Esko PDF+ file into the Automation Engine Container on the Automation Engine Server, and the trapping ticket is communicated to the server.
  - c) Adobe Illustrator closes the document that is being trapped and becomes free for other tasks.
- a) The **Shuttle** palette pops up and provides information regarding the status.
5. Once it is finished successfully , double-click the name of the file in the Shuttle palette to open the selected document.

The DeskPack Trapper plug-in now merges the trapping layer with the original design. The document is opened and the traps are fully editable objects in a separate Automatic Trap Layer, on top of the unmodified artwork layers. If your document already contained an Automatic Trap Layer or Automatic Reverse Trap Layer, it will be replaced.

**Note:**

You should always open a trapped document from the **Shuttle** window. That way the Automatic Trap Layer will be fetched from the server and added to the document.

If not, you will see a warning. If you click OK the document will open, without the Automatic Trap Layer.

### 4.5.2. Selective Trapping

Selective trapping is trapping just a selection of objects rather than the whole design.



DeskPack Trapper ignores non-printable and hidden layers. Actually, they are even omitted from the temporary PDF+ file on the Automation Engine Container.

If you do not want certain objects to be trapped, it should be enough to move them to a non-printable or hidden layer.

### 4.5.3. Processing Step Layers

Processing Step Layers and all objects in them are excluded from trapping.

For more information on Processing Step Layers, we refer to the **Processing Step Layers** chapter of the **Esko Data Exchange** documentation: <https://www.esko.com/en/support/product?id=Esko%20Data%20Exchange%20for%20Adobe%20Illustrator>

## 5. PowerTrapper for Adobe Illustrator

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### 5.1. Introduction to PowerTrapper for Adobe Illustrator

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#### 5.1.1. What is Trapping?

The trapping process is a safeguard against possible (even likely) fluctuations in the printing process.

Minor discrepancies in registration, slight paper shifting or stretching of e.g. PE foil can cause inks to misregister. When two adjoining colored objects do not meet exactly, you can end up with a printed result like the one below:



The overlap creates a dark area and the gaps cause an undesirable light area. To prevent these potential discrepancies, a trap can be added, causing the original colors to slightly overlap each other:



In general trapping is necessary when:

- The two colors each consist of at least one ink but they have no common inks.
- The two colors have one or more common inks, but the percentages of those common inks are significantly different in the two colors (for example a color made of 50% M and 10% C will be trapped with a color made of 50% Y and 80% C).

Placing a fine line where the colors join, made of a color that contains components of both adjoining colors, can trap such areas effectively.

## 5.1.2. What is PowerTrapper Classic?

The PowerTrapper Classic trapper allows you to define trapping settings to automatically trap your documents in Illustrator.

**Important:** PowerTrapper Classic is not available when working on a PDF+ file. For more information on PDF+, we refer to the **Ink Manager** chapter of the **Esko Data Exchange** documentation: <https://www.esko.com/en/support/product?id=Esko%20Data%20Exchange%20for%20Adobe%20Illustrator>

You can:

- define common and advanced trapping settings (see [The Trap Dialog](#) on page 117),
- create specific trapping rules for trapping pairs of your choice (see [Rules](#) on page 126),
- save all your trapping settings as a preset to be able to reuse them on other documents (see [Trap Presets](#) on page 130),
- select your traps for further editing (see [The Trap Select Tool](#) on page 131),
- have a visual overview of the trapping settings by color pair, and refine them if necessary (see [The Color Pairs Palette](#) on page 131),
- remove your traps at any time as PowerTrapper Classic trapping is non-destructive (your traps are created in a separate Trap Layer, see [The Trap Layer](#) on page 131).

**Note:**

- We recommend you use Illustrator's **Overprint Preview** mode to see your traps more accurately.
- PowerTrapper Classic doesn't trap hidden objects. If you want to exclude an object from trapping, you can either hide it or use a rule.

## 5.1.3. DeskPack Trapper for Adobe Illustrator

If you install PowerTrapper Client, PowerTrapper for Adobe Illustrator or Instant Trapper for Adobe Illustrator version 18.1 or higher, DeskPack Trapper for Adobe Illustrator is installed as well, using the same license.

**Note:** Automatic Trapping in the DeskPack Trapper for Adobe Illustrator is only available if you have a PowerTrapper Client or PowerTrapper for Adobe Illustrator license.

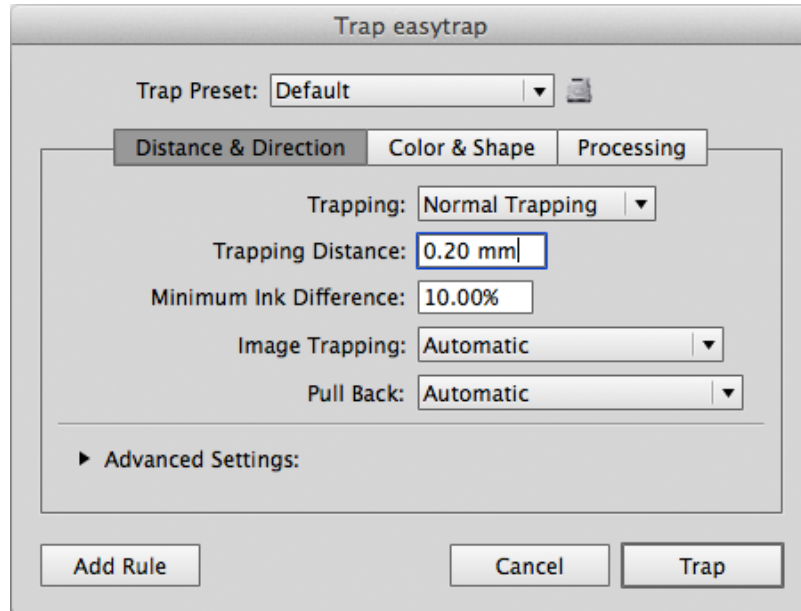
For more information on the DeskPack Trapper for Adobe Illustrator, we refer to the DeskPack Trapper for Adobe Illustrator documentation: <https://www.esko.com/en/support/product?id=DeskPack%20Trapper%20for%20Adobe%20Illustrator>

## 5.2. Trapping with PowerTrapper Classic

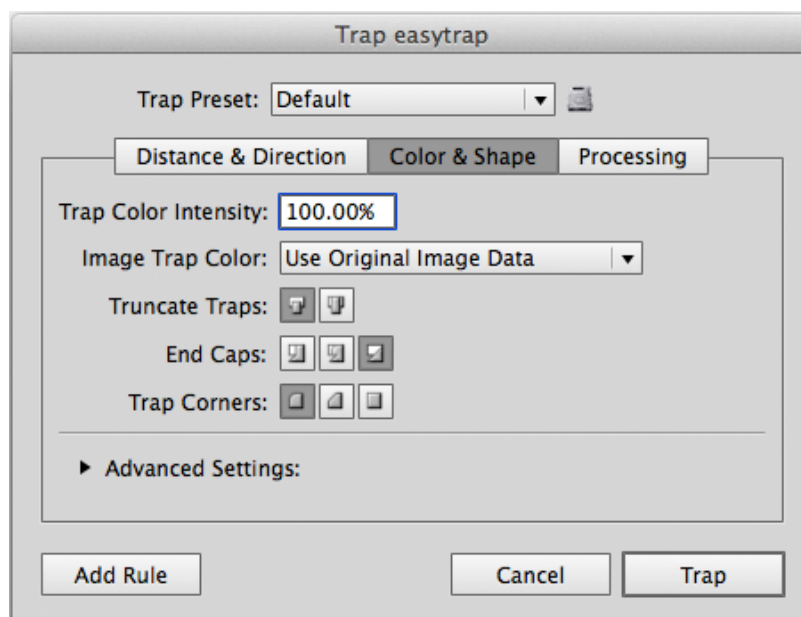
To introduce you to PowerTrapper Classic, here is how to add simple traps to a document.

1. Open the document you want to trap.

2. Go to **Window > Esko > PowerTrapper Classic > Trap ...** or use the **Option + Shift + Command + X** shortcut (on Mac).
3. In the **Trap** dialog that opens, enter the **Trapping Distance** you want to use.



4. Go to the **Color & Shape** tab and choose:
  - how to **Truncate Traps** (on center or on edge),
  - how to shape the **End Caps** (square, round or object dependent),
  - how to shape the **Trap Corners** (round, beveled or mitered).



**Note:**

For more information about the different trapping settings you can choose, see:

- [Distance and Direction Settings](#) on page 118,
- [Color and Shape Settings](#) on page 122,
- [Processing Settings](#) on page 125.

5. Click the **Trap** button to trap your document. This creates your traps in a new Trap Layer.

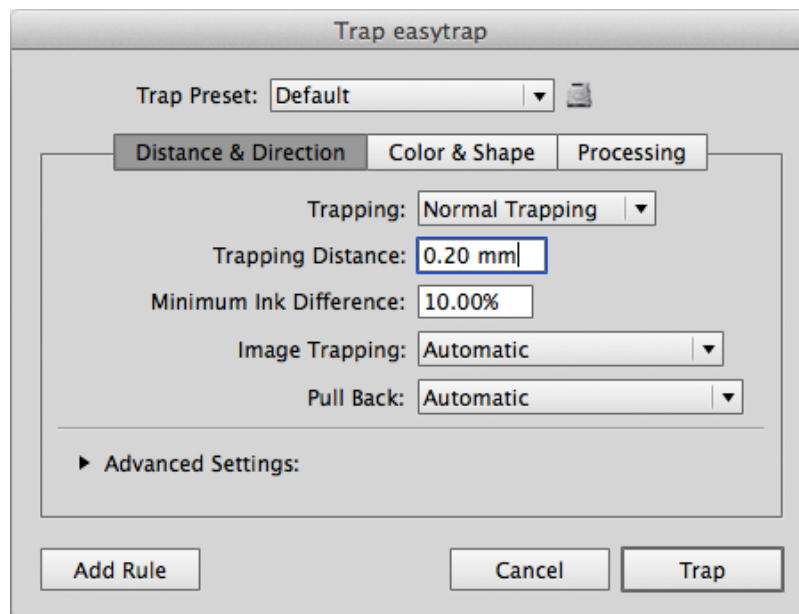
**Note:**

- To cancel the trapping process, use the **Escape** key.
- To undo your traps once trapping is done, use **Command + Z**.

### 5.2.1. The Trap Dialog

The **Trap** dialog is where you define all your trapping settings.

1. Go to **Window > Esko > PowerTrapper Classic > Trap ...**, use the **Option + Shift + Command + X** shortcut (on Mac) or double-click the Trap Select tool to open the Trap dialog.



2. Choose your trapping settings in the **Distance & Direction**, **Color & Shape**, and **Processing** tabs.
3. If needed, define trapping rules.
4. Save your trapping settings as a trap preset to be able to reuse them on another document.

**Note:** The Trap Preset List contains 6 default presets.

## Distance and Direction Settings

### Trapping

You can choose between two trapping modes:

- **Normal Trapping:** This selects adjoining color pairs, which are likely to cause registration problems like ugly light gaps, and unwanted halo effects.

PowerTrapper Classic automatically chooses the most appropriate trap direction based on the relative luminance of the adjoining colors. Lighter colors are generally trapped into darker colors to minimize the visual effect of the trap.

- **Reverse Trapping:** This prevents overprint of adjoining color areas by trapping these color pairs with a white knockout (erasing) trap. The white knockout trap is put on top of the lighter of the two colors.

This is useful to prepare a job for Dry Offset printing (e.g. metal beverage cans) where overprinting of inks is not allowed as the inks would contaminate each other on the blanket.

### Trapping Distance

Enter the width you want to give your traps. The unit used is the **General** unit defined in Illustrator's **Unit & Display Performance Preferences**.

The default trap width is 0.2 mm (or equivalent in your chosen unit).

### Minimum Ink Difference

Trapping is applied to two adjoining colors when either:

- The two colors each consist of at least one ink but they have no common inks.
- The two colors have common inks but there is a difference of at least the **Minimum Ink Difference** percentage for two or more inks making up these colors.

These differences in ink percentages must be in opposite directions.

For example, with the default minimum ink difference percentage of 10%, the following two colors will be trapped:

1st color: C 5% M 10% Y 50% K 15% (+10% K)

2nd color: C 5% M 10% Y 85% K 5% (+35% Y)

Increase the minimum ink difference to trap colors that are more different, lower it to trap colors that are more similar.

### Image Trapping

- **Automatic** (default): this determines the most suitable trap direction automatically, by comparing the average lightness of the CT image with the lightness of the adjoining area, then traps the lighter color into the darker one.
- **Always Towards Images:** this always traps line art under adjoining CT images.
- **Always Towards Line Art:** this always traps CT images under adjoining line art.

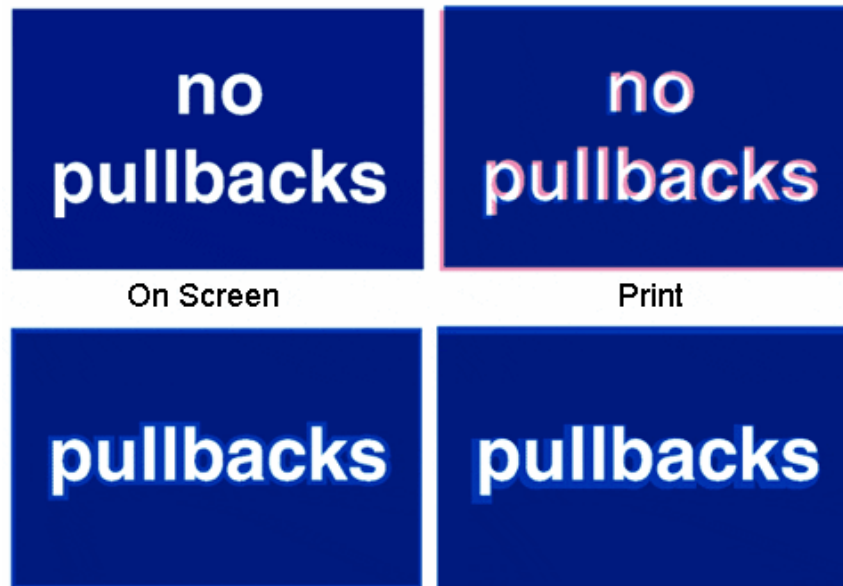
### Pull Back

An ink pull back keeps away all but the darkest ink of a color area composed of multiple inks that borders to a very light background.

It prevents individual inks from the composed color to become visible on the background due to registration errors during the printing process.

Ink pull back is also known as "Cutbacks" or "Keepaways".

The example below shows an object with 100% dark blue and 50% magenta on an empty background. 50% magenta is pulled back and a fine line of 100% dark blue remains. The color that remains (dark blue) is the **pull back ink**.



- **Automatic** (default): this creates pull backs on rich black or rich colors, when the color left in the pull back area is not very different from the composed color.

In the example below, the left color is composed of 100% purple ink and 20% cyan. The darkest ink (purple) is not very different from the composed color, so using the **Automatic** pull back option will create a pull back.

The right color is composed of 100% dark red ink and 20% blue ink. The darkest ink (dark red) is very different from the composed color, so using the **Automatic** pull back option will **not** create a pull back.



- **Only Pull Back Rich Black:** this only creates pull backs on rich black.
- **Do Not Pull Back:** this never creates any pull back.

### Advanced Settings

Click the triangle beside **Advanced Settings** to show the advanced settings.

**Trapping Distance**

If you want to use a different distance when trapping into black, spot colors or images or when creating pull backs, enable the corresponding option and enter the trapping distance to use.

The unit used is the **General** unit defined in Illustrator’s **Unit & Display Performance Preferences**.

**Image Trapping**

If you don’t want images to be trapped with each other, disable **Trap images to images**.

**Pull Back**

If you chose to use **Automatic** pull back (see *Pull Back*), the **Also pull back light inks** option is available. Enable it if you want to create pull backs even when the pullback ink (ink remaining in the pull back area) is visibly different from the composed color.

Enable **Pull back images and gradients** if you want to create pull backs on images and gradients.

**Trap decision**

- By default, PowerTrapper Classic uses the color luminance (**Use Lightness**) to define the trapping direction, except for opaque inks, for which the Inks order is used.
  - trap direction: from brightest to darkest
- If the **Treat spot colors as opaque** option is chosen, color luminance is used only for CMYK. For opaque and spot inks, the trap direction is determined by the ink sequence.
  - trap direction for spot colors only: towards the separation listed the lowest in the Separations palette darkest
  - trap direction goes from the process to the spot color if the spot color is below the process color in the Separations list
  - trap direction if the spot color is above the process color: from brightest to darkest
- By selecting **Use separation order**, the trap direction is determined by the ink sequence for all inks, including CMYK.
  - trap direction: towards the separation listed the lowest in the Separations palette darkest
- **Use reverse separation order** does the same, using the reversed ink sequence.
  - trap direction: towards the separation listed the highest in the Separations palette darkest

**Note:** Using the Separation Order option will give the same result as changing all inks (including CMYK) to Opaque.

**Overshoot Mode**

You can choose between the following three overshoot modes:

- **Automatic** (default): The centerline behavior is according the rules determined in the color pair list.
- **Never on Dark Areas:** The centerline is forced not to get beyond the center of dark areas.
- **Never:** The centerline is forced not to get beyond the center of any area.

An example:





During trapping, this example will generate the following color pairs:

Color Pairs						
Trap Session: Trap Session 1						
Hits	Pair	Trap	Distance	Shape	Intensity	Pullback Ink
1 ▶	Black → Yellow	<input type="checkbox"/>	0.2 mm	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	100%	
1 ▶	Blue → Magenta	<input type="checkbox"/>	0.2 mm	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	100%	
1 ▶	Magenta → Yellow	<input type="checkbox"/>	0.2 mm	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	100%	
2 ▶	Yellow → Blue	<input type="checkbox"/>	0.2 mm	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	100%	
1 ▶	Blue → Black	<input type="checkbox"/>	0.2 mm	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	100%	

5 Pairs

By default (**Automatic**), this color pair list results in the following traps:



If the parameter is set to **Never on Dark Areas**, this will result into:



If the parameter is set to **Never**, this will result into:



## Color and Shape Settings

### Trap Color Intensity

By default, PowerTrapper Classic uses the full color of the object to spread in the trap (100% trap color intensity).

However, you can create a trap of a lighter color by reducing the trap color intensity percentage.

### Image Trap Color

Choose how to trap your images:

1. **Use Original Image Data** (default): when spreading an image, PowerTrapper Classic uses the underlying image data (when the image is clipped) to create the trap (see example 1 below).

**Note:** When there is no underlying image data (the image isn't clipped), it will create an empty trap.

2. **Extend Image Data:** PowerTrapper Classic will automatically extrapolate the image along its clipping path edge to ensure the trap looks as expected even if there is no clipped image data outside the visible image (see example 2 below).
3. **Use an Approximate Flat Color:** Instead of using existing or extrapolated image data in the trap, PowerTrapper Classic will use a solid color. A suitable color is determined by averaging the image's colors along its boundary with the object to trap (see example 3 below).





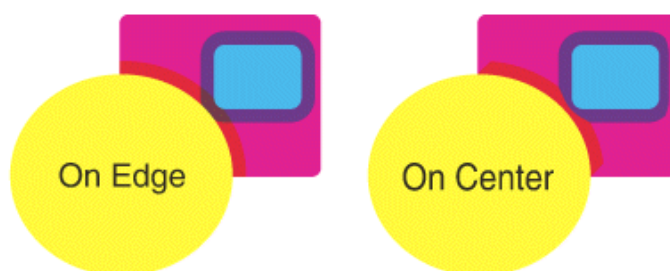
**Note:** If the **Use Postscript Compatible Image Traps** preference is on, the image trap color option has no influence on the result. Trapping will not generate any extra image data but image traps will create traps with lineart representing vectorized pixels. The lineart will also use Postscript Overprints instead of the multiply blend mode. These image traps are always created using the 'Use Original Data' option. Note that to have a correct visualization of your traps, you need to switch on the 'Overprint Preview' in the Illustrator View menu.

**Note: Convert Blended Objects to Images** in the PowerTrapper Classic Preferences will convert blended objects to images before trapping.

### Truncate Traps



PowerTrapper Classic can truncate the trap so that it doesn't stick out on another color. There are two truncation modes:

- **On Center**  (default): when a portion of a trap comes too close to the contour of another object, PowerTrapper Classic limits it to half the distance between the trapped object and the other object.
- **On Edge** : when a portion of a trap comes too close to the contour of another object, it is truncated on the other object's edge.



### End Caps


This option specifies how to shape the ends of an open trap.

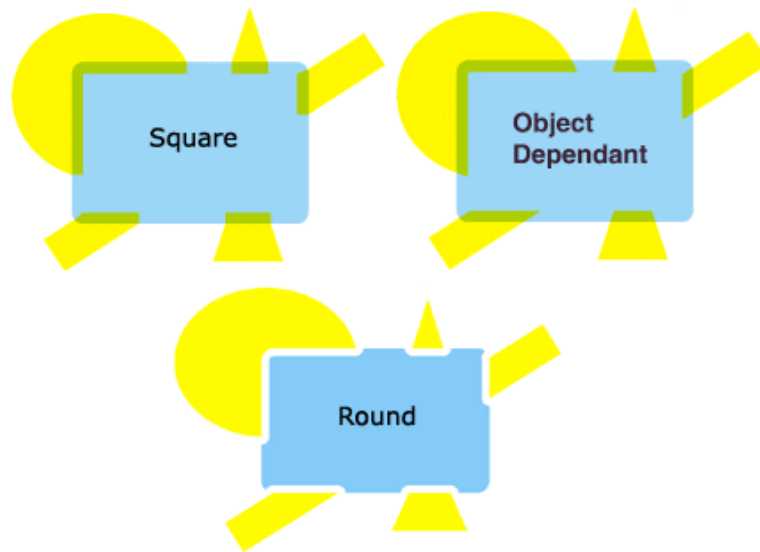
- **Square**  (default): this option ends the trap at right angle to the adjoining object.
- **Round** : this rounds the ends of the trap. This option is typically only used in combination with white knockout (reverse trapping).



**Attention:**




We recommend not to use **Round End Caps** together with **Truncate Traps On Center**, as this can generate some artefacts (the round caps will be truncated).

- **Object Dependent** : with this option, the trap is a logical continuation of the contour of the spread object.



**Trap Corners**

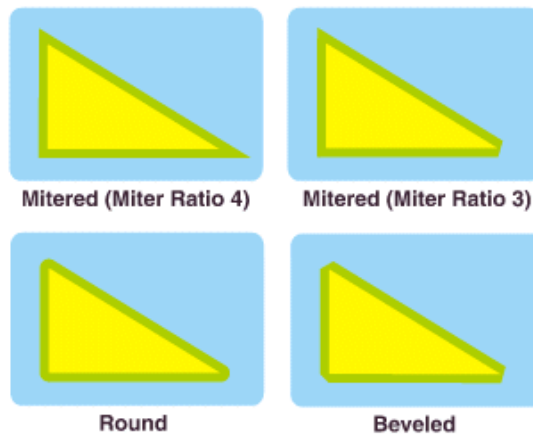
This option allows you to change how the traps' sharp corners will be handled.

- **Round**  (default): a round cap will be placed at all corners.
- **Beveled**  : this will cut sharp corners off.
- **Mitered**  : this option works with a miter ratio.



The miter ratio serves to limit the length of the sharp corner (the distance from the base of the trap to the corner point).

The default miter ratio value is 4. This means that if the length of the sharp corner is more than 4 times the **Trapping Distance**, then the corner will be cut off (beveled). If it is less than 4 times the **Trapping Distance**, the corner will be left as it is.



### Advanced Settings

Click the triangle beside **Advanced Settings** to show the advanced settings.

#### Truncate Traps

If you want to truncate traps into black differently, select **Into black** and choose the truncation mode (**On Center** or **On Edge**). For more information about truncation modes, see [Truncate Traps](#).

### Processing Settings

#### Color Pairs

PowerTrapper Classic can trap all hits (occurrences) of a color pair the same way, or recalculate the trap direction for different hits.

- **Each hit can have its own decision** (default): this recalculates the trap direction for each hit of a color pair.
- **Same decision for all hits**: this traps all hits of the same color pair in the same direction.
- **Same decision for objects smaller than**: this uses the same trap direction for hits of a color pair belonging to small objects, and recalculates the trap direction for hits belonging to bigger objects.

Use the field next to the option to determine the maximum size of small objects.

The unit used is the **General** unit defined in Illustrator’s **Unit & Display Performance Preferences**.

The default size is 1 mm (or equivalent in your chosen unit).

#### Restrictions

In some cases PowerTrapper Classic can safely ignore certain object types to speed up the trapping.

- **Respect existing traps**: if your document has already been trapped, select this option to keep the existing trap layer out of the trapping process.
- **Ignore bitmaps** : this keeps bitmap pixel data from being trapped. Bitmap data is contoured before trapping, which may slow down trapping depending on the bitmap’s contents. Bitmaps with lots of small isolated islands will typically take a longer time to trap.



**Attention:** When you indicate an object type to ignore, it will be ignored completely as if it did not exist in the job. Also, the ignored objects will not truncate trapping areas resulting from other objects below them.

If the **Respect existing traps** is enabled, traps in the selection will be kept, and no trapping is performed on these locations. If the option is off, selected traps will be removed, and will be re-trapped. This only works for traps created by PowerTrapper Classic or Instant Trapper.

**Small Gaps**

Some input jobs contain very small unintentional gaps between neighboring objects, preventing the correct trapping of these objects. Although it is better to clean up such jobs before trapping, PowerTrapper Classic can ignore these gaps automatically.

To use this option, select **Close when smaller than** and enter the maximum size small gaps can have.

The unit used is the **General** unit defined in Illustrator’s **Unit & Display Performance Preferences**.

The default size is 0.01 mm (or equivalent in your chosen unit).



**Attention:** If you set a big gap size, trapping may become slower, and small parts of the job may be ignored during trapping.

**Rules**

Rules allow you to define custom trapping settings for specific trapping pairs.

**When to Use Rules?**

In most cases the general trapping settings you enter in the **Trap** dialog will give you excellent results, but in some cases you will need to refine them using rules.

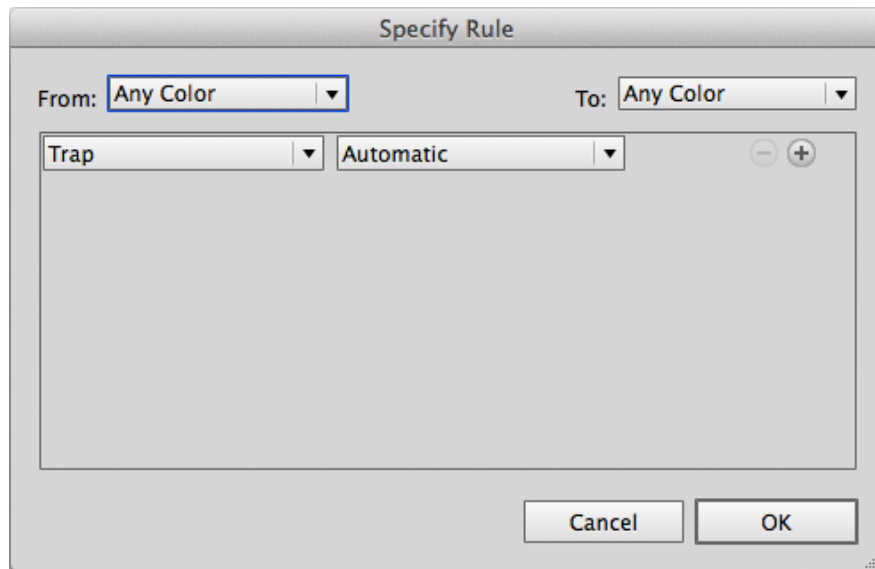
Rules allow you to specify exceptions to the general trapping settings for certain color pairs. They are an advanced feature and should be used only by experienced users.

For example, you can use them in the cases below:

- To set a different trap distance for a specific spot ink.  
Sometimes you need a larger trap distance for spot inks if there is no other ink to help cover leaks on the press.
- To prevent trapping or ink pull back in specific cases.  
Depending on the type of the adjoining colors, trapping and / or pull back may be undesirable.
- To force a specific trap direction.  
PowerTrapper Classic determines the trap direction based on the relative lightness of the adjoining colors. If the colors have a similar lightness level, it selects an arbitrary direction. You can use a rule to make it always use a particular direction for a color pair.
- To specify a different shape and / or truncation mode for certain color pairs.  
For example you can choose to use “On Center” truncation when trapping under a 100% black line and “On Edge” truncation on all other color pairs.

**Creating a Rule**

1. Click the **Add Rule** button at the bottom of the **Trap** dialog.



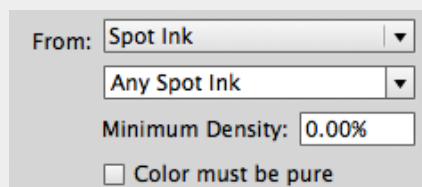
- In the pop-up that opens, choose the trapping pair to apply the rule to using the **From** and **To** lists.

You can create a rule to trap from/to:

- any color,
- a particular ink (process, spot or opaque),

**Note:**

In this case, you can choose the ink name, from which **Minimum Density** the rule will apply, and if the color must be pure (no other separation in the color object) to apply the rule.




If **Spot Ink** is selected, the dropdown underneath will contain all Spot Colors used in the document.


- A specific Printing Method
  - a particular object (image, gradient or empty background),
  - the registration color.
- Choose the contents of the rule.

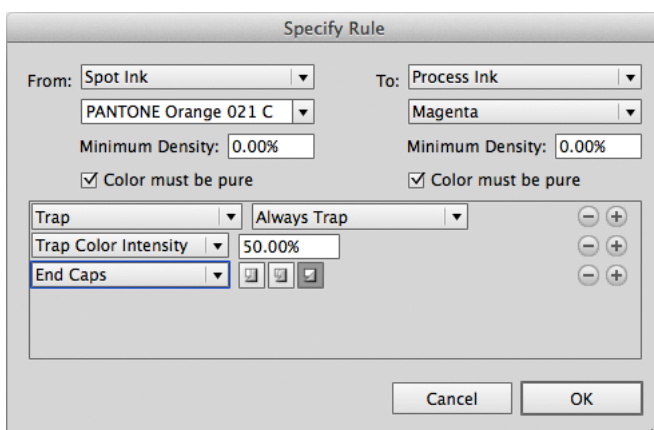
Options	Description
Trap	<ul style="list-style-type: none"> <li><b>Automatic</b> lets PowerTrapper Classic calculate the trapping direction.</li> </ul>

Options	Description
	<ul style="list-style-type: none"> <li>• <b>Always Trap</b> always spreads the “From” color/object on the “To” color/object.</li> <li>• <b>Do Not Trap</b> never traps the “From” and “To” colors/objects together.</li> </ul>
<b>Trapping Distance</b>	Use this to define a special trapping distance for the trapping pair.
<b>Trap Color Intensity</b>	Use this to define a special trap color intensity for the trapping pair.
<b>Pull Back</b>	<ul style="list-style-type: none"> <li>• <b>Automatic</b> lets PowerTrapper Classic decide if there should be a pull back on the trapping pair.</li> <li>• <b>Always Pull Back</b> always creates a pull back on the trapping pair. The darkest ink of the pair is the pullback ink (remaining ink in the pull back area).</li> <li>• <b>Do Not Pull Back</b> never creates a pull back on the trapping pair.</li> </ul>
<b>Pull Back Distance</b>	Use this to define a special pull back distance for the trapping pair.
<b>Pull Back Fill Mode</b>	<ul style="list-style-type: none"> <li>• <b>Normal</b> gives normal pull backs.</li> <li>• <b>Sharpen</b> allows sharpening on pull backs. This sharpening is used e.g. for white text on images, on CD's or DVD's. Sharpening is done by pulling back the image, and adding 100% black in the trapping area.</li> </ul>
<b>Reverse</b>	<ul style="list-style-type: none"> <li>• <b>Automatic</b> lets PowerTrapper Classic decide if the trapping pair should have a reversed trap.</li> <li>• <b>Always Trap Reversed</b> always generates a reversed trap for the trapping pair.</li> <li>• <b>Do Not Trap Reversed</b> never generates a reversed trap for the trapping pair.</li> </ul>
<b>Truncate Traps</b>	Choose if traps generated for the trapping pair should be truncated on center or on edge. See <a href="#">Truncate Traps</a> for details.
<b>End Caps</b>	Choose how to shape the ends of open traps for the trapping pair (square, round or object dependent). See <a href="#">End Caps</a> for details.
<b>Trap Corners</b>	Choose how to shape the trapping pair's trap corners (round, beveled or mitered). See <a href="#">Trap Corners</a> for details.
<b>Direction Mode</b>	Select <b>into both colors</b> to use bidirectional trapping. In case of bidirectional trapping, the trap will go half the trapping distance in each direction.



Options	Description
<p><b>Horizontal / Vertical distortion</b></p>	<p>Set the percentage of the trapping distance to be used in vertical / horizontal direction. In the example underneath, the trap was generated with no vertical distortion (so 100%, i.e. using the entered trap distance) and horizontal distortion set to 50% (i.e. half the trap distance).</p> 

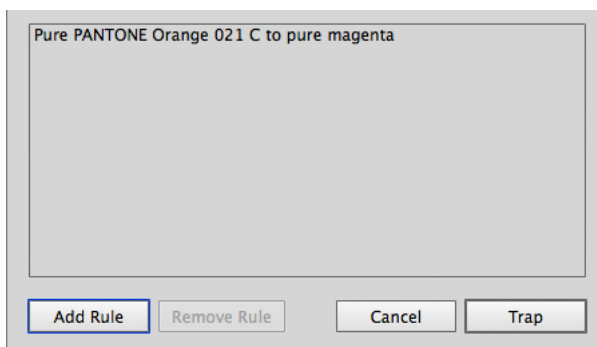
4. If necessary, use the  button to add contents to your rule.



You can use the  button to remove contents.

5. When you are done defining your rule, click **OK**.

You can now see your rule at the bottom of the **Trap** dialog.



When trapping your document, PowerTrapper Classic will trap the trapping pairs that match rules according to those rules, and the rest of your document according to the main trapping settings.

If necessary, you can add another rule, or remove a rule previously created. You can also edit a rule by double-clicking it in the **Trap** dialog.

## Trap Presets

With PowerTrapper Classic, you can save all your trapping settings as a preset to be able to reuse them on other documents.

Trap Presets can be shared between different Esko Applications (PackEdge, ArtPro, DeskPack, ...)

The Trap Presets list contains 6 default Presets that can't be changed or removed:

- Default
- Bi-directional (including a rule to trap into both colors)
- Combipress (including a rule based on Printing Method)
- Offset (optimized for offset printing)
- Reverse
- Sharpening (including a rule optimized for sharpening)

## Defining a Trap Preset

1. Define your trapping settings in the **Trap** dialog. Add rules if you need to.

See [Distance and Direction Settings](#) on page 118, [Color and Shape Settings](#) on page 122, [Processing Settings](#) on page 125 and [Rules](#) on page 126.

2. In the **Trap Preset** list, choose **Save...**
3. Give your preset a name and click **OK**.

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

- To delete a preset, select it in the **Trap Preset** list then select **Remove**.
- To edit a preset, select it in the **Trap Preset** list, make your changes in the trapping settings, then save it again with the same name.
- The location where the Trap Presets are saved, is set in **Illustrator > Preferences > Esko > PowerTrapper Classic Preferences ....**

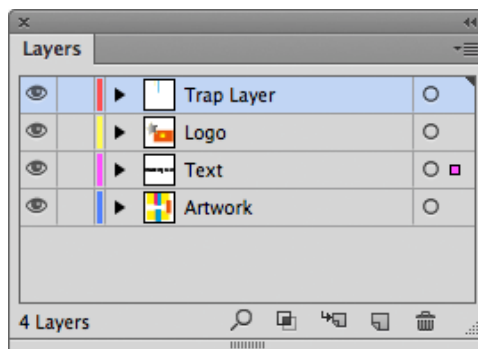
When choosing **Use Shared Trap Ticket Folder**, Trap Presets are saved in the default "shared users" folder:

- /Users/Shared/EskoArtwork/Trap Tickets on Mac OS X
- C:\Documents And Settings\All Users\Documents\EskoArtwork\Trap Tickets on Windows XP
- C:\Users\Public\Documents\EskoArtwork\Trap Tickets on Windows 7


When choosing **Use Custom Trap Ticket Folder**, Trap Presets are saved in the folder you define by clicking the **Browse** button.

### 5.2.2. The Trap Layer

PowerTrapper Classic creates traps in your document's Trap Layer, and leaves the other layers intact. If your document doesn't contain a trap layer, PowerTrapper Classic will create one.



### 5.2.3. The Trap Select Tool

You can find the Trap Select tool  in the Tools panel. Use it to select trap areas in your job, or double-click it to open the Trapping dialog.

You can:

- click between two adjoining color areas to highlight the edge and select the trap,
- make a rectangle selection to highlight all edges and select all traps in that rectangle.

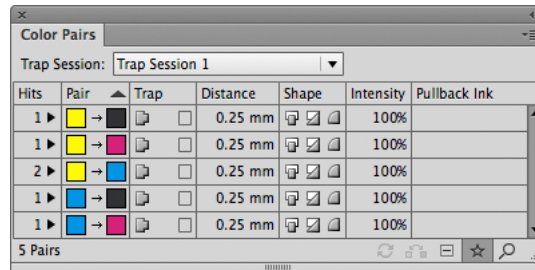
**Note:** Selecting one or more traps in your document using the Trap Select Tool also selects the corresponding color pair(s) in the **Color Pairs** palette. See [The Color Pairs Palette](#) on page 131.

**Tip:** Sometimes the highlight color doesn't contrast enough with your document's colors to be easily visible. In this case you should modify the Trap Layer's highlight color.





### 5.2.4. The Color Pairs Palette

After trapping your document, the **Color Pairs** palette shows the trapping settings associated with each of your document's color pairs.







It pops up automatically after trapping, or you can go to **Window > Esko > PowerTrapper Classic > Color Pairs** to open it.



For each color pair, the palette shows:

- the number of **Hits** (occurrences of that color pair) in the document,
- the type of object in the pair (empty background , flat color , image  or gradient )


**Note:** When you click on the flat color icon, you will see the ink percentages.


- the type of trap performed on that color pair (normal trap , pullback , reverse trap )
- the trapping **Distance** used,
- the traps' **Shape** (truncation , caps , corners )
- the **Intensity** of the trap color,
- the **Pullback Ink** (when the trap is a pullback).


### Viewing Traps


- To select all the traps of a color pair in your document, click that color pair in the **Color Pairs** palette.

**Note:** Use **Command** or **Shift** to select several color pairs, and highlight all the corresponding traps in your document.

- To select traps without showing the highlight color around them, click  or select **Don't Highlight Selected Edges** in the palette's fly-out menu.

To show the highlight color around selected traps again, click  again or select **Highlight Selected Edges** in the menu.

- To zoom on selected traps, click  or select **Zoom to Selected Edges** in the menu.



To revert to the previous zoom, click  again or select **Don't Zoom to Selected Edges** in the menu.

- If the **Trap Select** tool is active, use the arrow keys to browse through the color pairs. Activate the **Zoom to Selected Edges** to browse and visualize your traps one by one in your job.

**Note:** Use **Arrow left-right** to expand or collapse the trapping pair list.

### Viewing Trap Settings


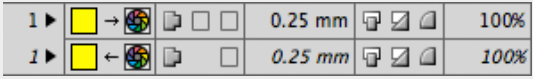



You can hide trapping settings that you are not using to make the **Color Pairs** palette smaller.









- To hide all color pairs that are not trapped with each other, select **Hide Non-trapping Color Pairs** in the palette's fly-out menu.  
To show them again, select **Show All Color Pairs** in the fly-out menu.
- To hide all color pairs that don't have traps selected in your document, click  or choose **Hide Unselected Edges** in the palette's fly-out menu.  
To show them again, click  again or select **Show All Edges** in the menu.
- To hide the **Distance, Shape, Intensity** or **Pullback Ink** column, select **Hide Distance/Shape/Intensity/Pullback Ink Column** in the palette's fly-out menu.  
To show the column again, select **Show Distance/Shape/Intensity/Pullback Ink Column** in the fly-out menu.


### Refining your Traps

You can use the **Color Pairs** palette to select certain traps and change their trapping settings.

- Select either:
  - the color pair(s) to edit in the palette,
  - the traps to edit in your document (if you want to only edit certain traps of a color pair).
- Make your desired changes as explained below:

to change a color pair's...	do...
<p><b>trapping direction</b></p>	<p>click Swap Trap Direction . Trap direction can be from left to right, from right to left, or bidirectional. In case of bidirectional trapping, the trap will go half the trapping distance in each direction.</p> <p><b>Note:</b> When you change the direction for only certain traps of the color pair, the color pair will be duplicated in the palette (e.g. one entry for spread and one for choke).</p> 
<p><b>trap type</b></p>	<p>choose Normal Trap , Pullback  or Reverse Trap  in the <b>Trap</b> column.</p> <p>You can also use this to trap a non-trapping color pair.</p>

to change a color pair's...	do...
trap distance	click the <b>Distance</b> value to edit it.
trap truncation	choose On Center  or On Edge  in the <b>Shape</b> column.
end caps	choose Square  , Round  or Object Dependent  in the <b>Shape</b> column.
trap corners	choose Round  , Beveled  or Mitered  in the <b>Shape</b> column.
trap color intensity	click the <b>Intensity</b> value to edit it.
pullback ink (for pull back traps only)	click the pullback ink to change it to another ink.

3. Click Update Traps  to apply your changes to your document's traps.

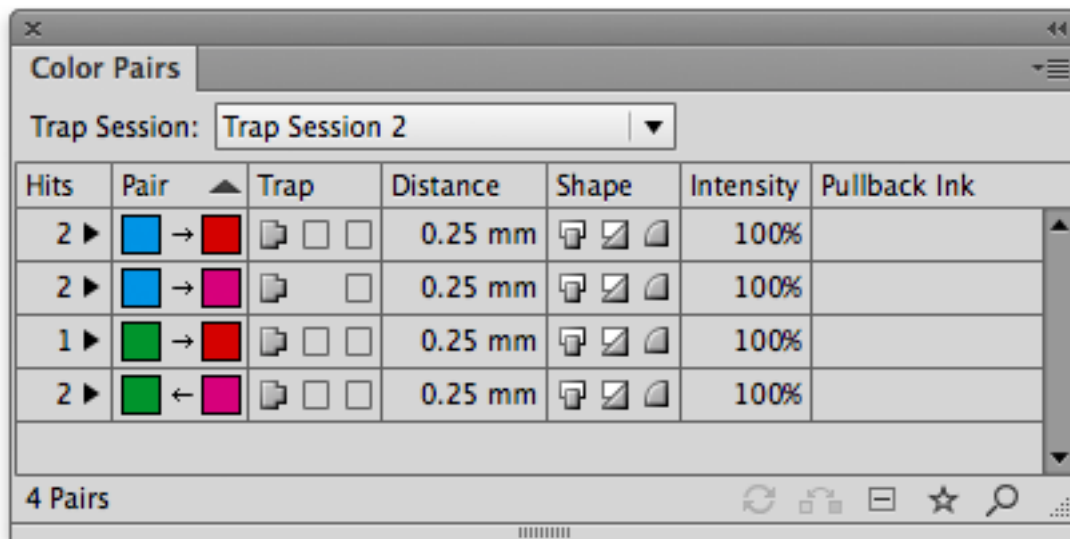
**Note:** To change several color pairs the same way, use **Command** or **Shift** to select them, then make the changes in one color pair. Clicking Update Traps will apply your changes to all selected color pairs.

### Trap Sessions

Every time you select **Trap...** or **Trap Selection...** in PowerTrapper Classic, the previous sessions of Color Pairs are kept, and a new Session is started.

**Note:** Changing the document will remove previous trap sessions. Only if the document is untouched in between trapping, the different trap sessions will be available.

You can switch to a previous session by selecting the session from the dropdown in the Color Pairs palette.



If you select a trap using the Select Trap tool, the Color Pairs dialog will switch to the corresponding session

**Note:** The Select Trap tool can only highlight traps from a single session. If you select (by dragging) traps from different sessions, only the traps from the current session are highlighted. If no traps from the current session are selected, the latest created trap session becomes active, and only traps from that session will be highlighted.

**Clear Sessions** in the Fly-out menu removes the Color Pairs information from all sessions, but does not affect the trap layer or the traps, and vice versa: removing the trap layer does not remove the Sessions. Therefore, if you want to restart trapping completely, it's advised to remove the Trap Layer AND apply "Clear Sessions".

You can rename a Session by activating it, and clicking **Rename Current Trap Session** in the Fly-out menu

Trap Sessions are saved when saving the Color Pairs.

**Note:** To be able to use the option **Respect existing traps**, you have to select the trap as well, otherwise PowerTrapper Classic will assume the document was changed, and the trap sessions will be removed.

### Saving and Loading Color Pairs

After trapping a document with PowerTrapper Classic, you can save its color pairs. This ensures you won't need to re-edit the color pairs if you need to change the traps later on.

#### When to Save Color Pairs?

You can save color pairs as soon as you are finished editing them.

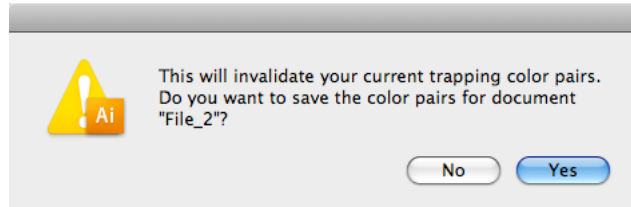
If you haven't saved your color pairs, doing the following will discard them:

- closing your document,

- using PowerTrapper Client, Viewer or Instant Trapper on another document open in Illustrator.

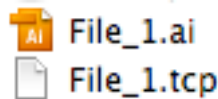
**Note:** This doesn't affect your document's traps.

In those cases, PowerTrapper Client will ask you if you want to save your color pairs.



### Where are Color Pairs Saved?

Your color pairs are saved in a file next to your document. This file has the same name as your document and ".tcp" as extension.



**Note:**

There can be only one color pairs file per document. If you make changes to your color pairs and save them again, your color pairs file will be updated.

If for some reason you need another version of your color pairs file, first save your document under a different name then save the color pairs again.

### Saving Color Pairs

- To save your color pairs, select **Save Color Pairs** in the **Color Pairs** palette's fly-out menu.

**Note:** This is only available when you have unsaved color pairs.

### Loading Color Pairs

- To load color pairs that you saved previously, select **Load Color Pairs** in the fly-out menu.

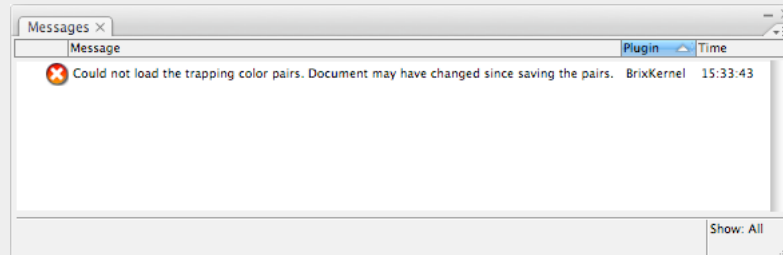


**Note:**

This is only available if you have saved color pairs for the current document.

You cannot load another document's color pairs.

You cannot load color pairs if you have changed the document after trapping.



## 5.3. Selective Trapping

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When using the **Trap** button in the **Trap** dialog, trapping is always done on the complete file. To apply traps on a selection only, you can use **Selective Trapping**

Selective trapping can be done by choosing **Window > Esko > PowerTrapper Classic > Trap selection...**

All other options are the same as for normal trapping: see [The Trap Dialog](#) on page 117

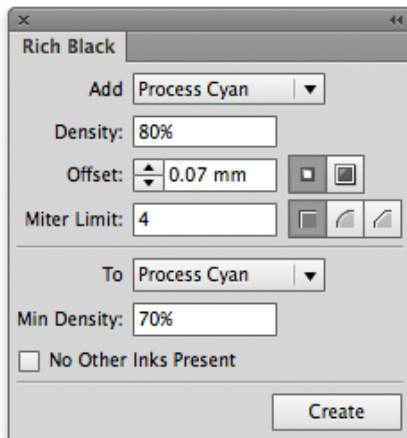
**Note:** The trapping will be calculated only on the selected objects. If an object is not selected, it will not be taken into account when calculating traps, even if the object is on top or behind the selected objects.

## 5.4. Add Rich Black

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The Rich Black tool can be used to obtain a darker black by overprinting all black areas with the ink that you specify, for example Cyan.

1. Open the Rich Black dialog by choosing **Window > Esko > PowerTrapper Classic > Rich Black**



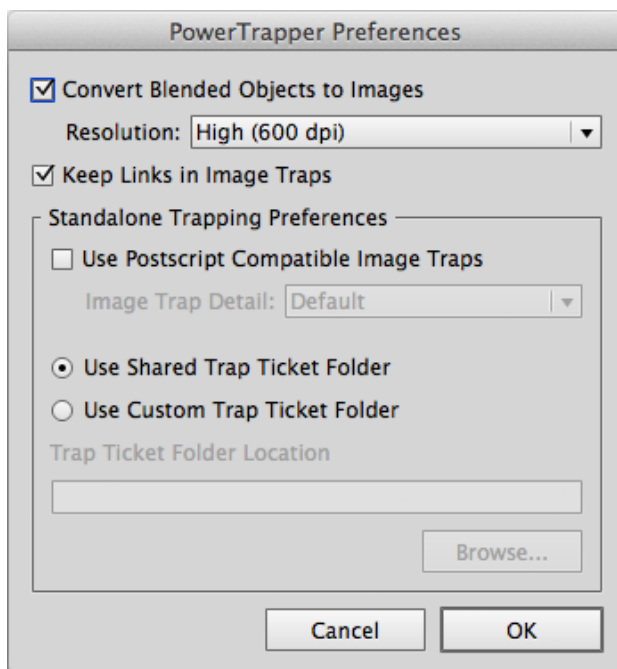
2. Select objects using the standard Adobe Illustrator selection tools.
3. Use the **Add** dropdown to select the ink (e.g. C) you want to add to create a rich black . The dropdown will contain all inks present in the job. You can add another ink using **New Separation ...** if needed.
4. Enter the **Density** you want to apply.
5. Set the **Offset** to define the distance between the edge of the added ink and the edge of the black object.
6. Set the **Miter Limit** as you would for trapping. Miter limit determines whether sharp corners in objects appear pointed or beveled. You can also select Bevel and Round options.

**Note:** The Miter Limit option is only available when the Miter option is selected.

7. Use the **To** dropdown to select the colors you want to change into rich black. All areas using the selected color, and above the **Minimal Density** percentage, will become rich black by adding the Add color.
8. Enable **No Other Inks Present** if you only want to create rich black from pure inks, and not in areas that already contain a mix of inks.
9. Click **Create** to generate a layer of overprinting objects to enrich the source ink. The layer will be called "Rich Black" by default.

## 5.5. PowerTrapper Classic Preferences

You can open the PowerTrapper Classic Preferences by choosing **Illustrator > Preferences > Esko > PowerTrapper Classic Preferences** (Mac) or **Edit > Preferences > Esko > PowerTrapper Classic Preferences** (Windows)



**Convert Blended Objects to Images** in the PowerTrapper Classic Preferences will convert blended objects to images before trapping. The Resolution for these images can be set to High (600 dpi), Medium (300 dpi) or Low (150 dpi).

If the **Use Postscript Compatible Image Traps** preference is on, the image trap color option has no influence on the result. Trapping will not generate any extra image data but image traps will create traps with lineart representing vectorized pixels. The lineart will also use Postscript Overprints instead of the multiply blend mode. These image traps are always created using the 'Use Original Data' option. Note that to have a correct visualization of your traps, you need to switch on the 'Overprint Preview' in the Illustrator View menu.

**Note:** The **Use Postscript Compatible Image Traps** is only applied when using PowerTrapper Classic. When using PowerTrapper Client, this option is not applied, since it is not compatible with the Trap tasks in Automation Engine 14.

If **Keep Links in Image Traps** is selected (default), a trap for a linked image will consist of the linked file and a clip mask. This will cause the linked file to be placed (and shown in the Links palette) for every trap. In case of a high number of traps, this might cause stability issues for Adobe Illustrator.

If the option is off, the image for the traps is embedded, and turned into a symbol, which is then used for every trap (with a different clip mask). This will not affect the Links palette, nor will it affect Adobe Illustrator's efficiency. This does not change the original image.

See also [Color and Shape Settings](#) on page 122

In the **Standalone Trapping Preferences**, you can set the location where PowerTrapper Classic saves the Trap Presets. See [Defining a Trap Preset](#) on page 130

- When choosing **Use Shared Trap Ticket Folder**, Trap Presets are saved in the default "shared users" folder:
  - /Users/Shared/EskoArtwork/Trap Tickets on Mac OS X

- C:\Documents And Settings\All Users\Documents\EskoArtwork\Trap Tickets on Windows XP
- C:\Users\Public\Documents\EskoArtwork\Trap Tickets on Windows 7
- When choosing **Use Custom Trap Ticket Folder**, Trap Presets are saved in the folder you define by clicking the **Browse** button.

## 6. White Underprint

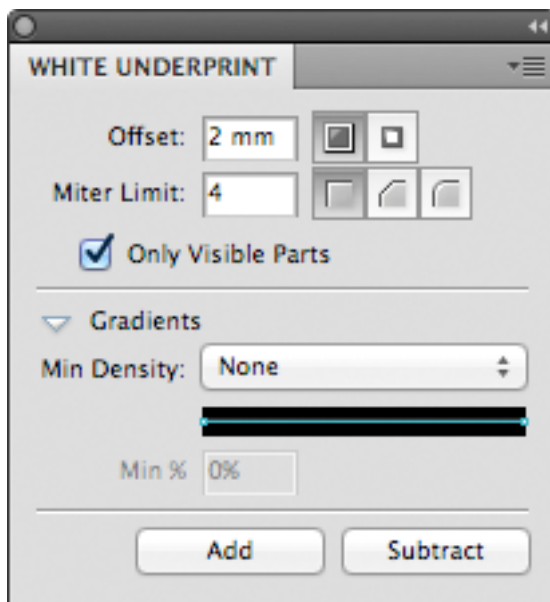
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### 6.1. White Underprint

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White Underprint allows you to create a white background underneath the selected objects. This white background can be necessary when printing on transparent or metal material. The White Underprint plug-in can generate white underprint objects for all kinds of Illustrator objects.

To open the White Underprint palette, click **Window > Esko > White Underprint**. The White Underprint palette appears.



### 6.2. Adding and Removing White Underprint

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

A new White Underprint layer will be created:

- If a different White Underprint ink is used
- If the White Underprint layer doesn't exist yet
- If the White Underprint layer was locked, hidden or no longer positioned as top layer.

1. Click **Window > Esko > White Underprint** to open the White Underprint palette.
2. Select one or more objects in the Illustrator document.
3. Set the White Underprint settings: see [White Underprint settings](#) on page 142

4. In the White Underprint palette:

- Click **Add** to add White Underprint for the selected artwork: the plug-in will compute the union of the selected artwork and add the resulting paths at the top of the White Underprint layer
- Click **Subtract** to subtract the selected artwork from the White Underprint layer. The plug-in will compute the union of the selected artwork, and put the resulting paths at the top of the White Underprint layer, in overprint, and at 0% of the selected White Underprint ink.

**Note:** If you want the White Underprint to be slightly bigger than the original objects, you should use a spread (an outward offset) when adding to the White Underprint layer, and a choke (an inward offset) when subtracting from the White Underprint layer. If the White Underprint should be slightly smaller, you should do it the other way around.

## 6.3. White Underprint settings

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To set up White Underprint:

1. Select **Window > Esko > White Underprint** to open White Underprint dialog box.
2. Define the **Offset**: the distance between the edge of the White Underprint layer and the edge of the object under which White Underprint is applied. By default the offset is set to Spread (outward offset). You can also choose to Choke (inward offset).
3. Set the **Miter Limit** as you would for trapping. Miter limit determines whether sharp corners in objects appear pointed or beveled. You can also select Bevel and Round options.

**Note:** The Miter Limit option is only available when using mitered corners.

4. Define if White Underprint should be generated only on visible parts of selected objects, by setting the **Only Visible Parts** option.
5. In the **Gradients** section, set how to handle Gradients.
  - **None:** By default objects with a gradient fill will be backed using a 100% solid white
  - **Choke by distance:** a gradient will be added to the White Underprint layer. The gradient will be choked over the entered distance, and run from the minimum % to 100%.
  - **Bump minimum %:** a gradient will be added to the White Underprint layer. The gradient will follow the same density as the original object, but values below the minimum % will be bumped up to the minimum value.
  - **Clip to minimum %:** a gradient will be added to the White Underprint layer. The gradient will follow the same density as the original object, but values below the minimum % will be clipped to 0%.

## 6.4. White Underprint Ink

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The Ink used for White Underprint can be defined by selecting **Options** from the fly-out menu of the **White Underprint** palette, 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".

Multiple White Underprint inks can be used in 1 document. After you've applied White Underprint using a first ink, just change the name and color patch of the White Underprint ink in the Options dialog. As of then, any new White Underprint objects will be generated using the new White Underprint ink.

**Note:** In order to prevent changes to existing White Underprint objects, be sure not to have any active selections while changing the White Underprint ink. If you wish to modify the color values of the existing White Underprint ink, please do so directly in the Swatch library.

## 6.5. Include White Objects

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The **Include White Objects** option can be set by selecting **Options** from the fly-out menu of the **White Underprint** palette.

If the option is disabled (default), no White Underprint is generated for white objects (colored with CMYK 0/0/0/0). By selecting the option, those objects will also get a White Underprint.

**Note:** Uncolored objects (i.e. if the fill and the stroke color is set to "none") will never get a White Underprint, regardless of this option.