

ArtPro+ 18

User Guide

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1.2. Installation

ArtPro+ is only supported on 64-bit operating systems, both on Mac and on Windows. Currently supported are:

- Mac OS 10.11, 10.12, 10.13 and 10.14
- Windows 7 64-bit, Windows 8 64-bit, Windows 8.1 64-bit, Windows 10.

You can download the installer for ArtPro+ from <http://mysoftware.esko.com>.

Download the ArtPro+.dmg file for mac, or the .exe file for Windows.

Note: If you want to use the free 30 day trial version of ArtPro+, you must install using the ArtPro+ Trial installer. If the regular installer has been run, there is no option to start the trial anymore. See [Trial version](#)

1.3. Licensing

You can check the **Licenses** info by choosing **Help > License Info**

You can run ArtPro+ on a free 30-day trial, with a valid local license, by connecting to a license server carrying valid network licenses, or by signing in to a Named User Subscription. More information on licenses and how to activate them can be found here: <https://www.esko.com/en/Support/Product?id=Licensing%20and%20Activation&ver=16>.

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- An ArtPro+ 18 Advanced license, either perpetual or Named User Subscription
- An ArtPro 18 license
- A PackEdge 18 license

ArtPro+ 18 Essentials and Advanced

As of ArtPro+ 16.1, there are two versions of ArtPro available. The following functionality is only available for ArtPro+ Advanced:

- **Step & Repeat**
 - Grid Step & Repeat. See [Grid Step & Repeat](#) on page 199
 - Open MFG files, Replace Structural Design stations & Adjust Bleed tool. See [Step & Repeat based on an MFG file](#) on page 209
- **Trapping Suggestions.** See [Trapping Suggestions](#) on page 190

1.4. What's New in ArtPro+ 18.0.1

ArtPro+ 18.0.1

Below is a list of changes in ArtPro+ 18.0.1 and a link to the specific page in the documentation.

New functionality:

- You can now convert outlines to live text, using **Convert Outlines to Text**. See [Convert Outlines to Text](#) on page 128
- You can now add **White Underprint**. See [White Underprint](#) on page 183
- **Barcodes**: You can now take the Barcode Properties from the Automation Engine Job Setup. See [Barcode properties from Automation Engine Job Setup](#) on page 182. Also, the **Laetus Pharma** barcode is now available. See [Laetus Pharma](#) on page 180
- In **Marks** you can now also use the **Job Parameters** and **Job Barcodes** from Automation Engine as smart text in a Mark. See [Marks](#) on page 214
- **Action Lists**: a number of new functions, and a number of new options to existing Actions were added to the Action List editor. You can now also add a Description to an Action List, which is shown in the **Action List** panel. See [Action Lists](#) on page 228
- You can now edit flat colors in the **Colors side drawer**. Also, Dynamic Marks are no longer shown in the Colors Side Drawer, and Registration Colors are always shown at the bottom of the list. See [The Colors Side Drawer](#) on page 61
- Using the **Cut on Crosshair** tool, you can cut away parts of the selected objects, based on the position of the Crosshair. See [Cut on Crosshair](#) on page 53
- You can now use an **ArtPro Classic Shortcut Set** instead of the default shortcuts. See [Shortcuts overview](#) on page 29
- When creating a rectangle or ellipse, you can now use the **Select Same Center** button to create the new shape on the center point of the selection, but using a different size. See [Create Rectangle / Create Ellipse](#) on page 121
- When merging separations, you can now choose to keep the original screen settings. See [Screening when merging separations](#) on page 186

Improvements:

- **Trapping**: improvements have been done in keeping a more consistent trapping direction when using Trapping Suggestions. See [Trapping](#) on page 188
- **Page Boxes**: the different page boxes are now shown in different colors. Also, objects outside the Crop Box now remain visible but dimmed. See [Page Boxes](#) on page 65
- **Save** is now always available, even when the document has not been edited. This can be useful when linked files had to be relocated upon opening a document, as saving will update the relinked paths in the file. See [Save Files](#) on page 42
- Images: **Open in External Editor** can now handle embedded multichannel TIFF or PSD images that contains a channel for some but not every process separation. When opening the image in Adobe Photoshop, an empty channel is added for the missing CMYK

separations. When opening the image back in ArtPro+, empty channels that are still empty, will be removed again automatically. Another case that now is supported is an embedded monochrome image with transparency. In Photoshop, this is opened as a Duotone with one channel, preserving transparency.

- If an open document resides inside an **Automation Engine** Job, the job name is displayed next to the name of the document in the title bar of the document.
-
- In the **Keyboard Increment** you can now set smaller values. Any value above 0 can be used, regardless of the amount of decimals. See [Preferences](#) on page 34

ArtPro+ 18

Below is a list of changes in ArtPro+ 18 and a link to the specific page in the documentation:

New functionality:

- **Step & Repeat based on MFG files.** See [Step & Repeat based on an MFG file](#) on page 209
- You can define in a one-up PDF what flaps can be trimmed and what flaps must be bled when using the one-up in a nested Step & Repeat, either in ArtPro or in Automation Engine, using **Placeholders** set in ArtPro+. See [Trimmable and Bleedable flaps](#)
- **Marks:** you can now create Repeating Marks, Cut Marks, Bearer Bars and Station Numbering Marks. See [Marks](#) on page 214
- You can now use **Extensis Universal Type Client.** See [Extensis Universal Type Client](#) on page 127
- The **Action List** offers a number of new functions. See [Actions](#) on page 233
- You can now **Step Through** an **Action List**, and you can now use **Parameters** when setting up an Action List. See [Stepping through an Action List](#) on page 229 and [Parameters in Action Lists](#) on page 237
- The **Colors Side Bar.** See [The Colors Side Drawer](#) on page 61
- You can now **lock** and unlock objects or layers. See [Locking objects](#) on page 90 and [Visibility, Locking and Printing state](#) on page 69
- When moving it, the **Crosshair** will now snap to selected objects. See [The Crosshair](#) on page 52
- Using the **Path Select tool** you can now select paths within a compound. See [Path Select](#) on page 83
- Using the **Align & Distribute** function you can align or distribute several objects. See [Align & Distribute](#) on page 97
- The **Object Browser** now contains a **Named Object Browser** mode, to get a quick overview of all Named Objects. See [Object Browser](#) on page 73
- Using the **Cut Path** tool, you can cut a path. See [Cut Path](#) on page 104
- **RGB** and **LAB** images can now be placed in ArtPro+. Channel mapping on RGB images is not possible. See [Place](#) on page 130
- Using the **Automatic Locking**, you can automatically lock all objects that do not use any of the visible separations. If the option is enabled, the visibility icon will switch between visible

and locked (instead of invisible). See [Automatic Locking based on the visible separations](#) on page 79

Improvements & updates

- While editing an object using the **Create & Edit Path** tool, Select All, Deselect All and Select Inverse will work on the anchor points of the object. See [Create & Edit Path](#) on page 102
- Merging separations by dragging and dropping a separation onto another separation now only works when holding the **Shift** key, to avoid unwanted merging. See [Separations](#) on page 74
- When possible, ArtPro+ will automatically fix errors in the **Barcode** code. Possible fixes are correcting a wrong check digit, adding a missing check digit, or adding a leading zero for e.g. a UPC-E barcode. See [Edit a barcode](#) on page 148
- When moving the Crosshair, the Crosshair will snap to all lines, anchor points and curves of all the objects in the selection. See [Move or rotate the Crosshair](#) on page 52
- License update to 18 - Local License Manager 18 is required. [Licensing](#) on page 20

1.5. The About palette

You can open the **About** window by choosing **ArtPro+ > About** (Mac) or **Help > About** (Windows).

The **About** palette contains build information, copyrights and a Legal Notices button.

Clicking **Legal Notices** will show the legal information. By clicking **Done** you go back to the default view.

1.6. Getting help

There are several menu items in the **Help** menu:

1. Clicking **Getting Started** will open a window that gives a quick tour on ArtPro+ tools and a link to a Getting Started video. After a first installation, this window will appear automatically when starting the application.
2. Clicking **What's New** will open a presentation on the new functions in ArtPro+
3. Clicking **Online Help** will open the Online Help page of your current ArtPro+ version in your internet browser. When available, the online help will open in your currently selected language.
4. Clicking **Knowledge Base** will open Esko's Knowledge Base in your internet browser, filtering on articles about ArtPro+.
5. Click **Esko Customer Experience Program** to change your choice in participating in the Esko Customer Experience Program. By enabling this option, you can help to improve ArtPro+ by allowing us to collect anonymous information about the way you use ArtPro+ and its features.
6. Use **License Info** to check your license settings. For subscription licenses, there is also a Sign In / Sign Out option. See [Licensing](#) on page 20

1.7. Languages

ArtPro+ is supported in English, French, Italian, German, Spanish, Japanese, Simplified and Traditional Chinese and Korean.

There are no application specific preferences to change the language. To see the user interface of ArtPro+ localized in one of these supported languages:

- On Mac OS X, go to **System Preferences > Language & Region** and move your preferred language to the top of the languages list.
- On Windows, go to **Control Panel > Clock, Language, and Region > Region and Language** (or **Region** on Windows 8 and 10) and change the **Format** to the preferred language.

2. Getting Started

Note:

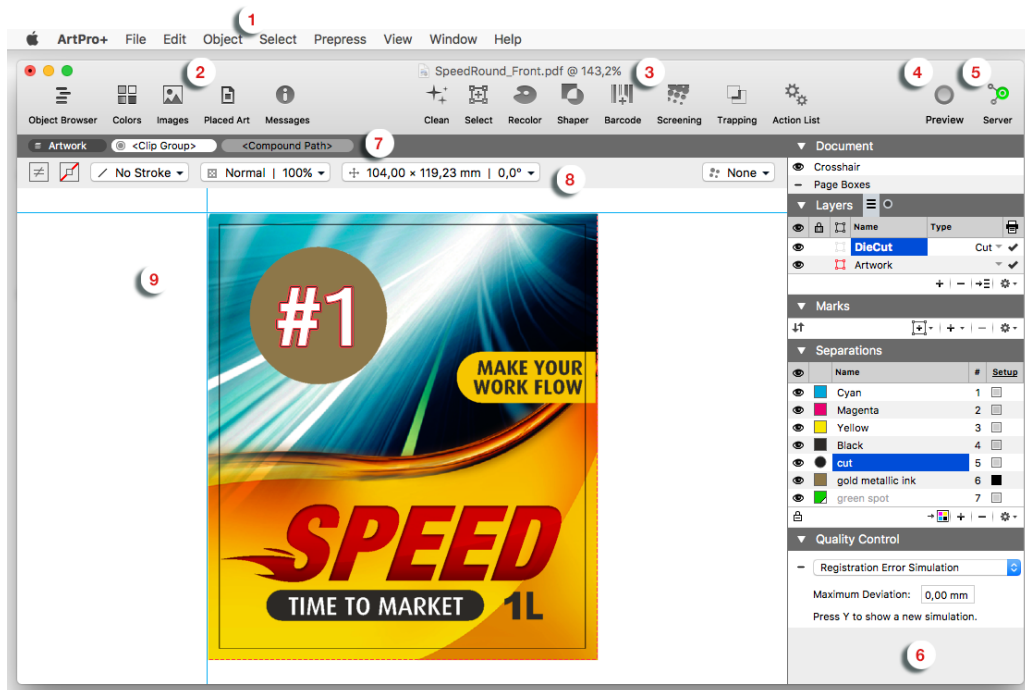
Besides this user guide, you can also find related documentation and a number of introduction videos on the ArtPro+ product page on Esko's help pages: <http://help.esko.com/products/artproplus>

You can also find interactive courses about different subjects on Esko's eLearning pages: <https://www.esko.com/en/support/blendedlearning/artproplus>

2.1. The ArtPro+ Workspace

When you launch the application, you get a blank application window (on Windows only), and the ArtPro+ menu bar.

Once you've opened a document, this is what you can see in the ArtPro+ Workspace:



1. The **menu bar**
2. The **Side Drawer** buttons for Object Browser, Colors, Images, Placed Art and Messages. See [Using the Side Drawer](#) on page 26
3. The **Toolbar**, containing [Clean](#) on page 109, [Select](#) (see [Select Same](#) on page 85 and [Select Advanced](#) on page 86), [Recolor](#) on page 119, [Shaper](#) on page 123, [Barcode](#), [Screening](#) on page 184, [Trapping](#) on page 188 and [Action List](#)
4. The **View Mode selector**. See [Preview or Outline mode](#) on page 54

5. The **Server Connection** indicator. See [Automation Engine connection](#) on page 45
6. The **Side Panel**, containing a Document section (page navigator for multi-page documents, crosshair, page boxes, layers), Marks section, Separations section and Quality Control section. See [Using the Side Panel](#) on page 26
7. The **Selection Breadcrumbs**. See [Selection Breadcrumbs](#) on page 84
8. The **Inspector**. See [The Inspector](#) on page 27
9. The **document pane**

2.1.1. Using the Side Drawer

The Side Drawer is a panel on the left side, that can show relevant information. You can make it visible by selecting any of the Side Drawer buttons. Click another button to switch the content of the Side Drawer, or click the active button to hide the Side Drawer again.

There are different Side Bar modes: Object Browser, Colors Side Drawer, Images Side Drawer, Placed Art Side Drawer and Messages Side Drawer.


The **Object Browser** lists all layers, groups and objects in the document. The Object Browser has two modes: the normal Object Browser, that lists all layers, groups and objects in the document, each with their thumbnail, and the Named Object Browser, that shows all Named Objects in the document. See [Object Browser](#) on page 73

The **Colors Side Drawer** lists all flat colors and gradients used in the current page of the open document. See [The Colors Side Drawer](#) on page 61

The **Images Side Drawer** gives an overview of all images in the document. See [Images Side Drawer](#) on page 136

The **Placed Art Side Drawer** shows a list of all placed PDFs used in the document. See [Placed Art Side Drawer](#) on page 143

The **Messages Side Drawer** lists all errors, warnings and information (in this order) that require you to take action. It is split up in different sections: Page Boxes, Preflight, Text, Barcodes, Processing Step Layers and Others. The tooltip of the messages will give more information about the message. Clicking on one of the entries will select the corresponding

object(s) or layer(s) in the job. If the **Zoom to Selection**  option is enabled, clicking an entry displays the selected objects as big as possible in the active window.

2.1.2. Using the Side Panel

The Side Panel contains several sections

- If you have a multi-page document open, you can use the Page Navigator. See [Navigating a multi-page document](#) on page 65
- In the **Document** section you can make the Crosshair visible or invisible and set up the Page Boxes. See [The Crosshair](#) on page 52 and [Page Boxes](#) on page 65.
- In the **Layers** part, you can reorder and rename layers, and view or change their visibility or printing state. See [Layers](#) on page 67.
- In the **Marks** part, you can manage your marks: load mark sets, create new marks, etc. See [Marks](#) on page 214. This is not available for Normalized PDF files.

- In the **Separations** section, you can reorder and rename separations, make specific separations visible or invisible, add printing separations, remove separations or merge separations. See [Separations](#) on page 74.
- In the **Quality Control** section you can do some quality control, such as looking for breakouts below a certain percentage, checking if the maximum Total Area Coverage is exceeded, checking the used screen sets, comparing two files or simulating a registration error. See [Quality Control](#) on page 56.

2.1.3. The Inspector

The **Inspectors**, shown in the bar between the **Selection Breadcrumbs** and the **Document Pane** show information and possible actions for the current selection, such as the current Fill and Stroke. Using the Inspectors, you can change these settings for the current selection.

Note: The last opened Inspector is remembered. When you make a new selection, the Inspector is reopened when applicable. You can close the automatically opened Inspector by clicking it or using the **Esc** key.

General inspectors

- [Fill Color and Stroke Color Inspector](#) on page 111
- [Stroke Inspector](#) on page 116
- [Transparency Inspector](#) on page 118
- [Transformation Inspector](#) on page 97
- Screen Set Inspector: see [Screening](#) on page 184

Inspectors for Images

- [Image Inspector](#) on page 132
- [The Channel Mapping Inspector](#) on page 133

Inspectors for Placed Art & Grids

- [Placed Art Separations Inspector](#) on page 140
- [Placed Art Inspector](#) on page 140
- [Layer Types Inspector](#) on page 142
- [The Grid Inspector](#) on page 199

Inspectors for Structural Design

- [Structural Design File inspector](#) on page 145
- [Structural Design Inspector](#) on page 145

Inspectors for Text

- [Text Inspector](#) on page 124
- [Text Box Transformation Inspector](#) on page 125

Inspectors for Barcodes

- Barcode Type Inspector, Barcode Code Inspector, Barcode Inspector, Barcode Font Inspector: see [Barcodes](#) on page 147

Inspectors for Marks

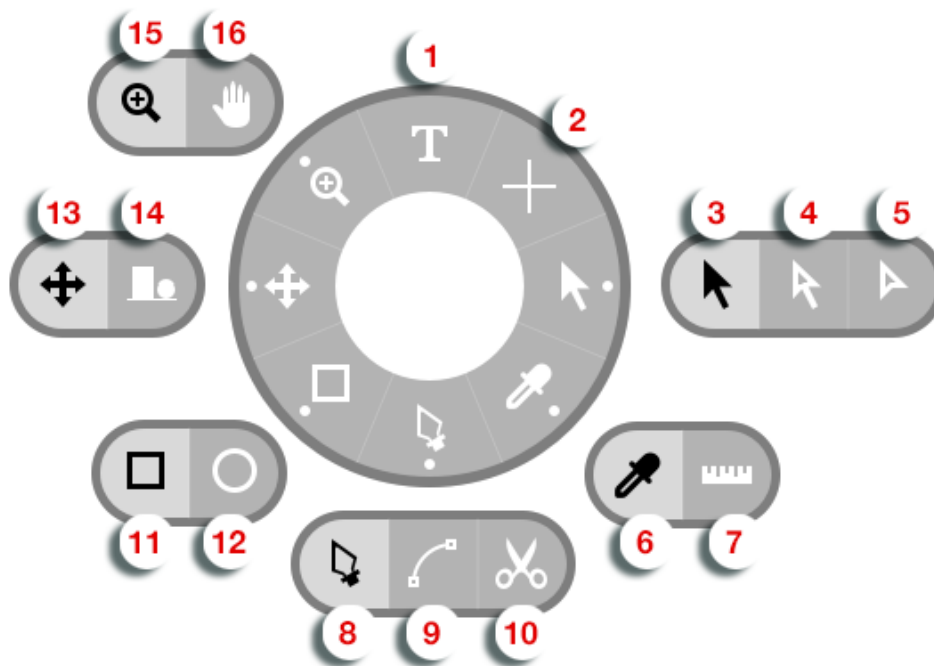
- Mark Text Content Inspector: see [Text Mark](#) on page 218
- Mark Inspector. See [Mark Types and their properties](#) on page 216
- The Mark Transformation Inspector. See [Mark Types and their properties](#) on page 216

Note: If the ArtPro+ window is not big enough to show all **Inspectors** for the current selection, they can be reduced to an abbreviated version or even just the corresponding icon.

2.1.4. Changing tools

There are different ways to select a tool

- Use the tool's shortcut. Using the shortcut multiple times will toggle between related functions, such as Zoom and Pan.
 1. **T**: Text tool. See [Using the Text Tool](#) on page 125
 2. **R**: Crosshair. See [Move or rotate the Crosshair](#) on page 52
 3. **V**: Group Select. See [Group Select](#) on page 81
 4. **V** or **A**: Object Select. See [Object Select](#) on page 82
 5. **V**: Path Select. See [Path Select](#) on page 83
 6. **D**: Densities. See [Densities](#) on page 60
 7. **D**: Dimensions. See [Dimensions](#) on page 59
 8. **P**: Create & Edit Path. See [Create & Edit Path](#) on page 102
 9. **P**: Split & Retrace. See [Split and Retrace](#) on page 103
 10. **P**: Cut Path. See [Cut Path](#) on page 104
 11. **S**: Create a Rectangle. See [Create Rectangle / Create Ellipse](#) on page 121
 12. **S**: Create an Ellipse. See [Create Rectangle / Create Ellipse](#) on page 121
 13. **E**: Transform. See [Transforming manually](#) on page 93
 14. **E**: Align & Distribute. See [Align & Distribute](#) on page 97
 15. **Z**: Zoom. See [Zoom tool](#) on page 51
 16. **Z** or **H**: Pan Tool. See [Pan tool](#) on page 52
- Using the **Tool Switcher**: right-click anywhere in your document, and select the tool you want in the toolswitcher wheel, or right-drag in the corresponding direction.



Note:
 The quickest way to change tools, is to (briefly) right-drag (or drag while holding the control key on Mac) in the direction of the tool you need, e.g. up for Text tool Select, left for Transform, etc. You can save time this way, because you don't have to click exactly on the tool.
 For subtools (such as Zoom and Pan), this will select the default (left) option. To select the other subtool, you will have to click it.

2.1.5. Shortcuts overview

Below, you see an overview of the default ArtPro+ shortcuts on **Mac** and on **Windows**.

By enabling the **ArtPro Classic Shortcut Set** in the Preferences, you can switch to a set of shortcuts similar to the shortcuts in ArtPro, shown in the right column. All other shortcuts remain unchanged. See [Preferences](#) on page 34

The shortcuts mentioned in the rest of the user guide are the **ArtPro+** shortcuts.

Shortcut	Mac	Windows	ArtPro Classic
Select All	Cmd+A	Ctrl+A	
Deselect All	Cmd+Shift+A	Ctrl+Shift+A	
Select Inverse	Cmd+Alt+A	Ctrl+Alt+A	
Page Boxes	Cmd+B	Ctrl+B	
Add Barcode	Cmd+Shift+B	Ctrl+Shift+B	

Shortcut	Mac	Windows	ArtPro Classic
Copy	Cmd+C	Ctrl+C	
Clean dialog	Cmd+Shift+C	Ctrl+Shift+C	
Transform Again	Cmd+D	Ctrl+D	
Shaper	Cmd+E	Ctrl+E	
Paste in Front	Cmd+F	Ctrl+F	Cmd+Alt+F
Paste in Back	Cmd+Shift+F	Ctrl+Shift+F	Cmd+Alt+Shift+F
Make Group	Cmd+G	Ctrl+G	Cmd+Shift+G
Release Group	Cmd+Shift+G	Ctrl+Shift+G	Cmd+Shift+U
Make Grid	Cmd+Alt+G	Ctrl+Alt+G	
Hide ArtPro+	Cmd+H	not available	
Hide Others	Cmd+Alt+H	not available	
Show Fill Color	Cmd+I	Ctrl+I	
Show Stroke Color	Cmd+Shift+I	Ctrl+Shift+I	
Select Same Fill Color	Cmd+Alt+I	Ctrl+Alt+I	
Select Same Stroke Color	Cmd+Alt+Shift+I	Ctrl+Alt+Shift+I	
Join Paths	Cmd+J	Ctrl+J	
Close Path	Cmd+Alt+J	Ctrl+Alt+J	
Preferences	Cmd+, (comma)	Ctrl+K	
Launch Workflow	Cmd+L	Ctrl+L	Cmd+Alt+L
Numeric Transform	Cmd+Shift+M	Ctrl+Shift+M	Cmd+L
New File	Cmd+N	Ctrl+N	
Open File	Cmd+O	Ctrl+O	
Contourize Text	Cmd+Shift+O	Ctrl+Shift+O	
Place	Cmd+Shift+P	Ctrl+Shift+P	
Place Image Inside	Cmd+Shift+Alt+P	Ctrl+Shift+Alt+P	
Page Boxes Setup	Cmd+Alt+P	Ctrl+Alt+P	Cmd+Alt+J
Quit	Cmd+Q	Alt+F4	
Show / Hide Crosshair	Cmd+R	Ctrl+R	
Save	Cmd+S	Ctrl+S	
Save As	Cmd+Shift+S	Ctrl+Shift+S	
Screening window	Cmd+Alt+S	Ctrl+Alt+S	
Trapping	Cmd+T	Ctrl+T	

Shortcut	Mac	Windows	ArtPro Classic
Spread / Choke	Cmd+Shift+T	Ctrl+Shift+T	Cmd+0
Export Gravure Tiff	Cmd+Alt+T	Ctrl+Alt+T	
Convert Outlines to Text	Cmd+Shift+Alt+T	Ctrl+Shift+Alt+T	
Select Same / Advanced	Cmd+U	Ctrl+U	Cmd+Alt+U
Paste	Cmd+V	Ctrl+V	
Paste with Layer Structure	Cmd+Shift+V	Ctrl+Shift+V	
Close File	Cmd+W	not available	
Close All Files	Cmd+Alt+W	not available	
White Underprint	Cmd+Shift+W	Ctrl+Shift+W	
Cut	Cmd+X	Ctrl+X	
Switch to Preview / Outline	Cmd+Y	Ctrl+Y	
Color Managed Preview	Cmd+Alt+Y	Ctrl+Alt+Y	
Undo	Cmd+Z	Ctrl+Z	
Redo	Cmd+Shift+Z	Ctrl+Shift+Z	
Fit in Window / Previous	Cmd+0	Ctrl+0	Cmd+F
Zoom to Selection	Cmd+Alt+0	Ctrl+Alt+0	Cmd+Shift+F
Actual Size / Previous	Cmd+1	Ctrl+1	
Synchronize Views	Cmd+Alt+1	Ctrl+Alt+1	
Lock	Cmd+2	Ctrl+2	Cmd+7
Unlock All	Cmd+Alt+2	Ctrl+Alt+2	Cmd+8
Hide	Cmd+3	Ctrl+3	
Show All	Cmd+Alt+3	Ctrl+Alt+3	
Bring to Front	Cmd+5	Ctrl+5	
Bring Forward	Cmd+Alt+5	Ctrl+Alt+5	
Send Backward	Cmd+Alt+6	Ctrl+Alt+6	
Send to Back	Cmd+6	Ctrl+6	
Make Clipping Mask	Cmd+7	Ctrl+7	Cmd+2
Release Clipping Mask	Cmd+Alt+7	Ctrl+Alt+7	Cmd+Alt+2
Make Compound	Cmd+9	Ctrl+9	Cmd+G

Shortcut	Mac	Windows	ArtPro Classic
Release Compound	Cmd+Alt+9	Ctrl+Alt+9	Cmd+U
Zoom in	Cmd++ (plus)	Ctrl++ (plus)	
Zoom out	Cmd+- (minus)	Ctrl+- (minus)	
Rotate View Clockwise	Cmd+Shift++ (plus)	Ctrl+Shift++ (plus)	
Rotate View Counterclockwise	Cmd+Shift+- (minus)	Ctrl+Shift+- (minus)	
Select Next Object	Ctrl+Tab	Ctrl+Tab	
Select Previous Object	Ctrl+Shift+Tab	Ctrl+Shift+Tab	
Cycle through document windows	Cmd+ `	Alt+Tab	
Show all separations	0	0	
Show single separation	1 to 9	1 to 9	
Object Select	A	A	
Dimensions / Densities	D	D	
Transform	E	E	
Pan	H	H	
Create & Edit Path tool/Split and Retrace tool	P	P	
Crosshair tool	R	R	
Create Rectangle / Create Ellipse	S	S	
Text tool	T	T	
Group Select tool / Object Select tool	V	V	
Zoom tool / Pan tool	Z	Z	
Switch between tabs	/	/	

Note: For shortcuts with digits (e.g. Cmd+6) it is advised to use the keys from the numeric keypad.

Note: Shortcuts that only apply if a specific function or tool is used are not mentioned in this list.

2.1.6. Modifier keys

Modifier Shortcuts only have effect as long as the key (or key combination) is held. Releasing the key will return to the previously selected tool.

These allow to quickly and temporarily switch from one tool to another.

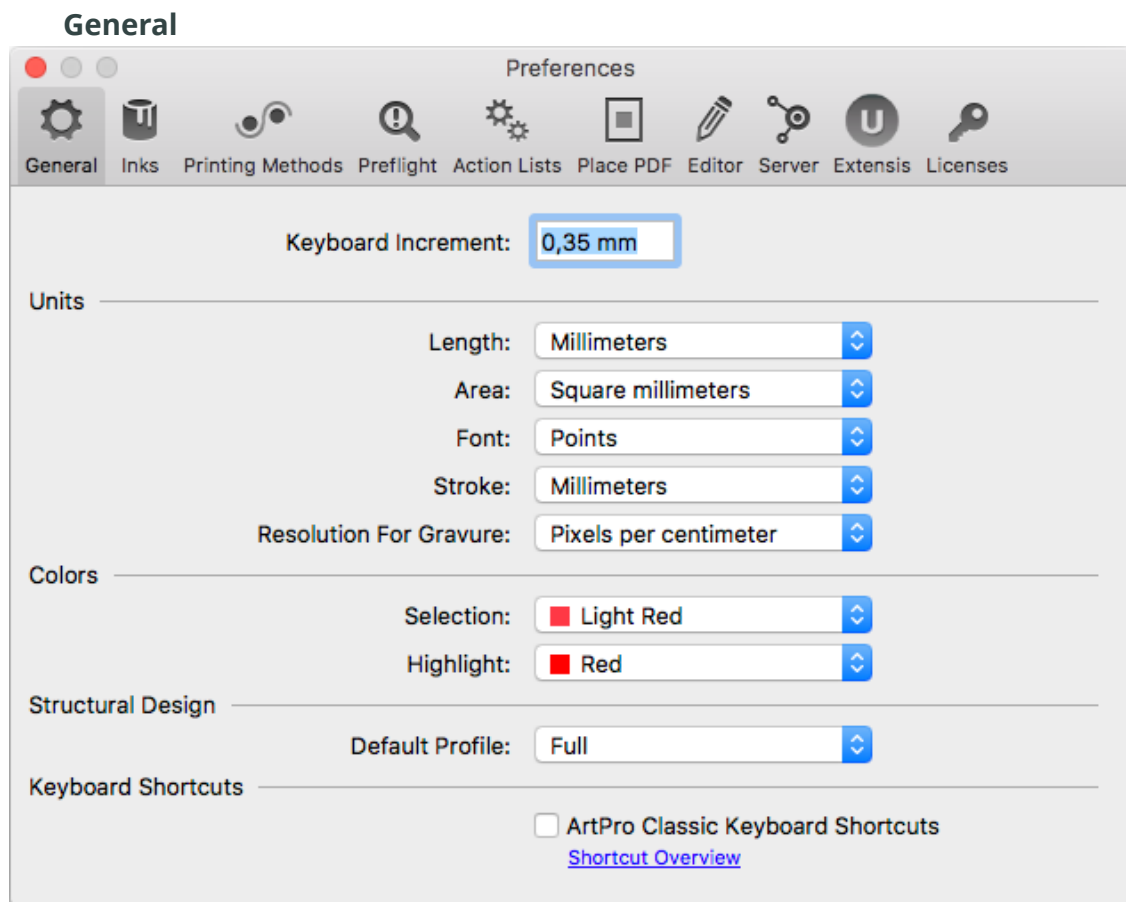
Modifier	Mac	Windows
Zoom In Modifier See Zoom tool on page 51	Space+Cmd	Space+Ctrl
Zoom Out Modifier See Zoom tool on page 51	Space+Alt+Cmd	Space+Alt+Ctrl
Zoom in/out using the scroll wheel of your mouse	Alt	Alt
Select Modifier <ul style="list-style-type: none"> • activates Group Select if Object Select is active, and vice versa • If another tool is active, the last used Select tool is activated 	Cmd	Ctrl
Pan Modifier See Pan tool on page 52	Space	Space
Crosshair Modifier <p>Note: When using the Crosshair Modifier, you can't rotate the Crosshair, nor can you nudge the Crosshair using the arrow keys: the Crosshair will snap to the selection or to the page box.</p> See The Crosshair on page 52	Cmd+Alt	Ctrl+Alt
Transform tool: <ul style="list-style-type: none"> • Move: constrain position • Scale: Proportional Scaling • Rotate: constrain rotation angle to multiples of 45 degrees 	Shift	Shift
Transform tool: <ul style="list-style-type: none"> • Move: copy 	Alt	Alt

Modifier	Mac	Windows
• Rotate:	rotate around the object's center	

2.2. Preferences

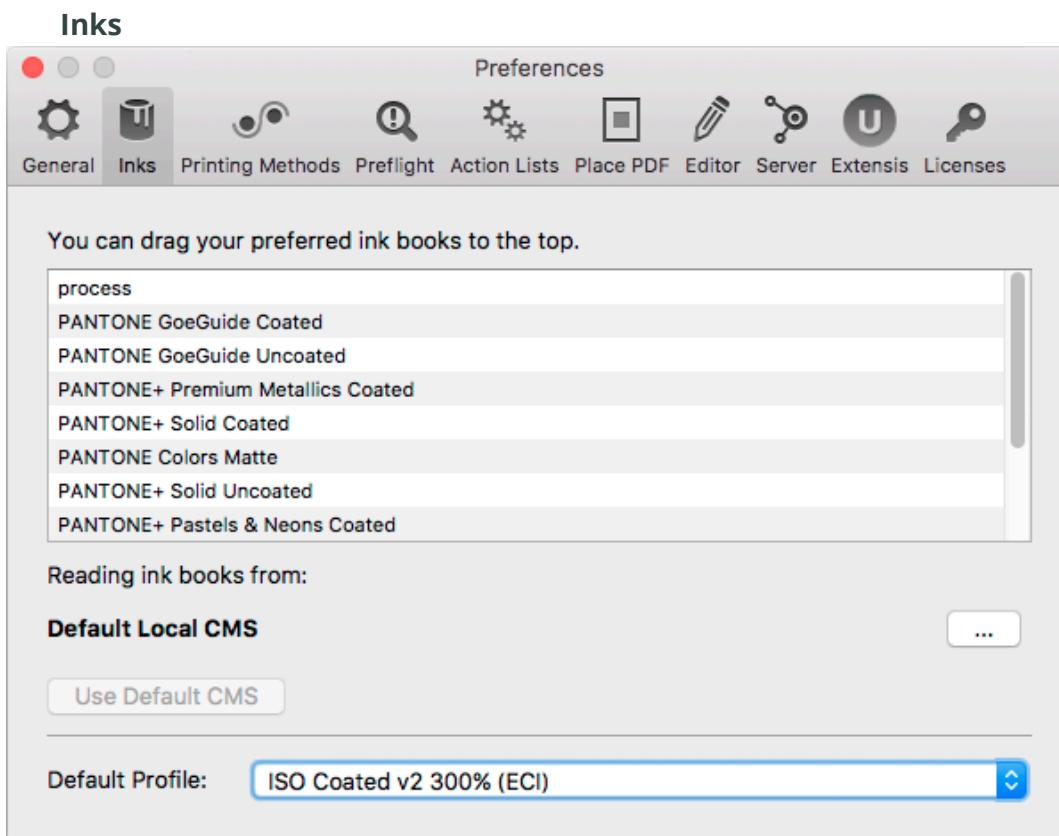
You can open the Preferences in two ways:

- By selecting **ArtPro+ > Preferences** (Mac) or **Edit > Options** (Windows).
- By its shortcut **Cmd+,** (Mac) or **Ctrl+K** (Windows).



- **Keyboard Increment:** the distance used when moving by using the Arrow keys, e.g. to move the crosshair or selected objects. The value can be entered in any of the supported units. Holding the Shift key while nudging will move the crosshair or selected objects over 10 times the Keyboard Increment distance.
- **Units:** the default unit to use for **Length, Area, Font, Stroke** and **Resolution for Gravure**. For Length, Font and Stroke the different units you can choose from are millimeter, centimeter, inch or points. For Area, the different units you can choose from are millimeter², centimeter², decimeter², meter² or inch². For Resolution for Gravure, you can choose from Pixels per inch, Pixels per cm and Pixels per mm.
- **Selection Color:** the color used to indicate what objects are selected.
- **Highlight Color:** the color used when objects or areas are highlighted, e.g. when using Total Area Coverage, Breakout or when in Trapping mode.

- **Default Profile:** the default Profile to use when placing a Structural Design file. See [Structural Design Inspector](#) on page 145
- Enable **ArtPro Classic Keyboard Shortcuts** to switch to a set of shortcuts similar to the shortcuts in ArtPro. Menu items and shortcuts are changed immediately. Click the **Shortcut Overview** link in the Preferences to see an overview of the changed shortcuts. All other shortcuts remain unchanged. See [Shortcuts overview](#) on page 29



The **Inks** section of the Preferences lets you set up the order of the available Ink Books. When creating a new ink, or modifying an existing ink, ArtPro+ will suggest inks based on what you type in the input field. The results will be ordered based on the order of the Ink Books in the Preferences. See also [Adding or changing a separation](#) on page 76

You can change the order of the Ink Books by simply dragging and dropping them.

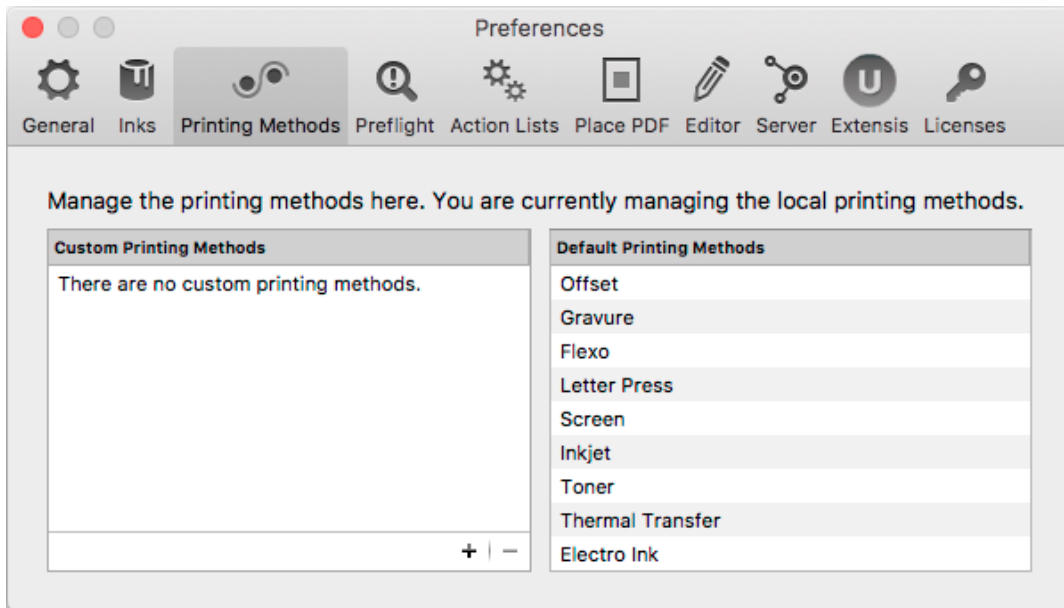
Reading ink books from: by default, ink books are read from the default local CMS, installed when installing ArtPro+. By clicking the ... button, you can browse to a CMS tree on a remote computer (e.g. from PackEdge, Automation Engine or Color Engine) and use those ink books instead. If connection to this remote computer is lost, a warning will be shown, and the local CMS is used again.

You can switch back to the local CMS by clicking the **Use Default CMS** button.

Note: Although the preview can change, changing the CMS (and ink books) doesn't change the ink information saved in the file for existing inks. The new ink books are only used when creating a new ink or changing an existing ink.

The **Default Profile** is used for rendering the document when Color Managed Preview is on and the Document does not have a profile yet. It is also added as rendering intent to PDF+ files that do not have a Document Profile yet. See [Color Management](#) on page 55

Printing Methods



In this tab you can manage the Printing Methods available in the Separations Setup. See [Separations Setup](#) on page 77.

If you are connected to an Automation Engine server, you will see and manage the server printing methods. If you are not connected to an Automation Engine server, you can see and manage the local printing methods, stored on your computer.

You can click the + button to add a custom printing method, or click the - button to remove the selected custom printing method. The Printing Methods defined here are available in the dropdown in the Separations Setup, along with the default Printing Methods as shown in the right column.

Preflight

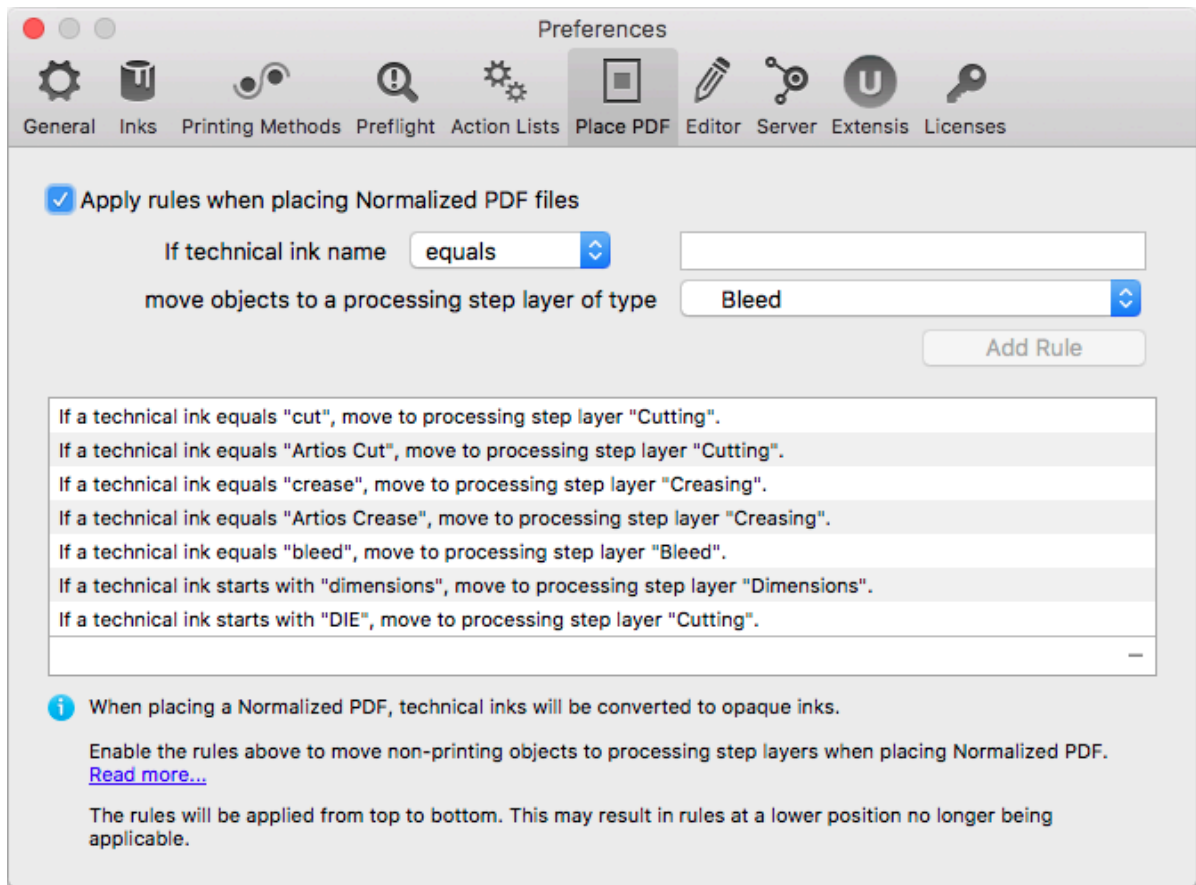
In this tab you can manage your Preflight Profiles. See [Manage Preflight Profiles](#) on page 196

Action Lists

In this tab you can manage your Action Lists. See [Action Lists](#) on page 228

Place PDF

Note: Placing a PDF is currently only possible in a PDF+, not in a Normalized PDF.



Normalized PDF does not support Processing Step Layers, while PDF+ does not support technical inks. Therefore, when placing a Normalized PDF file in a PDF+ file, you can map specific technical inks to specific Processing Step Layers. You can manage rules in the **Place PDF** section in the **Preferences**. The defined rules are applied if the **Apply rules when placing Normalized PDF files** option is enabled.

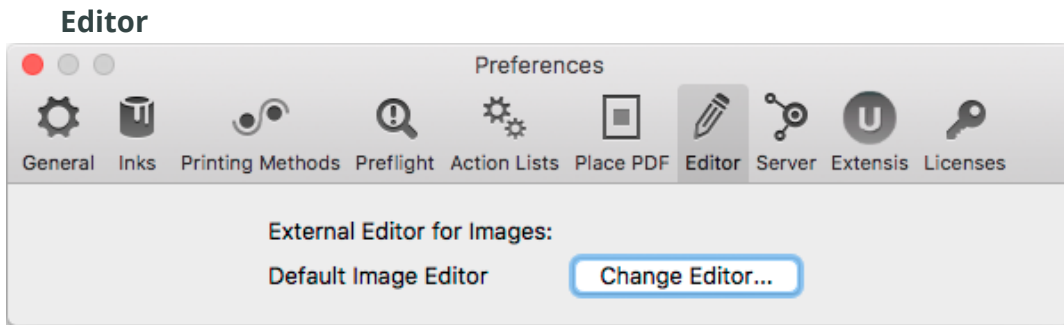
You can add a rule:

- Define the technical ink you want to use, based on the exact name or a part of the ink name (equal, starts with or contains)
- Defining to what Processing Step layer the objects should be moved to
- Click **Add Rule**

Select a rule and click the minus button to remove the rule.

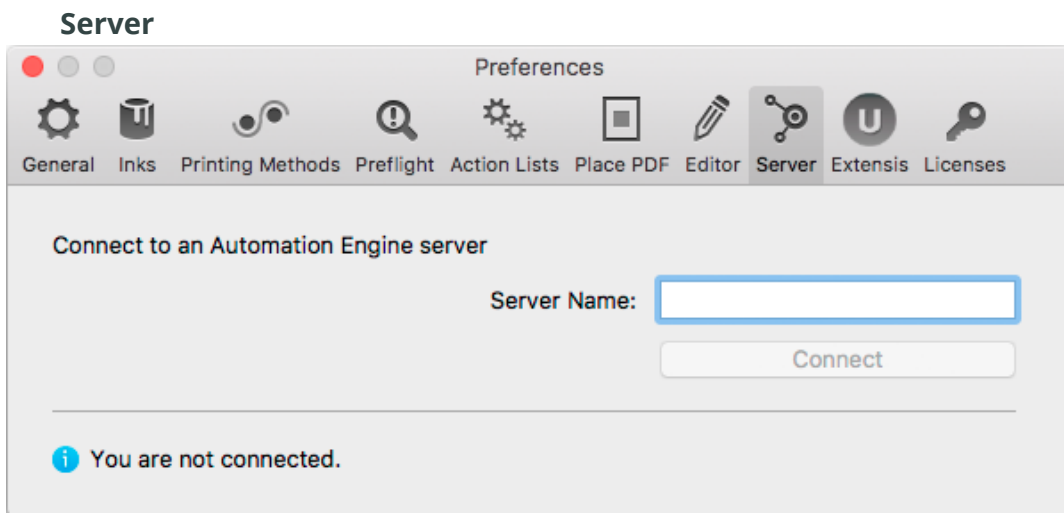
Note: The rules will be applied from top to bottom. This may result in rules at a lower position no longer being applicable.

For more information on placing Normalized PDF files, see [Placing Normalized PDF files in a PDF+ file](#) on page 138.



In the **Editor** tab, you can define the external editor to be used when opening an image in an external editor. See [Opening images in an external editor](#) on page 135

When set to **Default Image Editor**, ArtPro+ will open images for editing in the latest version of Adobe Photoshop that it can find on your computer. If no Photoshop is found, it will use the system's default application for editing images. By clicking the **Change Editor** button, you can browse to and select another application.

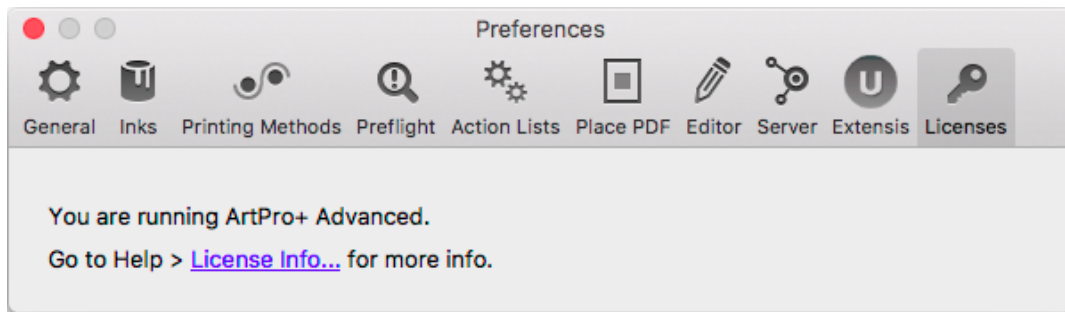


You can make a connection to an Automation Engine by entering the **Server Name** and clicking the **Connect** button. After entering user name and password, a connection will be made with the server.

Extensis

In this tab you can set the use of Extensis Universal Type Client. See [Extensis Universal Type Client](#) on page 127

Licenses



The Licenses tab shows you what version of ArtPro+ you are running, and contains a link to the **License Info** window. See [Licensing](#) on page 20

If you have a Network license for ArtPro+ Advanced, you can still switch to ArtPro+ Essentials using the option in this dialog, e.g. to allow another user to use the Advanced license.

2.3. Quitting ArtPro+

You can quit the application in two ways:

- By selecting **File > Quit** (Mac) or **File > Exit** (Windows).
- By its shortcut **Cmd+Q** (Mac) or by using **Alt+F4** to close the last document window (Windows).

3. Working with files

3.1. New File

File > New or its shortcut **Cmd+N** (Mac) or **Ctrl+N** (Windows) will create a new empty document.

The Media box and Trim box will have the same size as the Media box and Trim box of the last opened document.

If you save such a new document, it will be saved in PDF+ format. See [PDF, PDF+ and Normalized PDF](#) on page 43.

3.2. Open Files

You can open a file in different ways:

- By selecting **File > Open**, and browsing to the file you want to open.
- By its shortcut **Cmd+O** (Mac) or **Ctrl+O** (Windows), and browsing to the file you want to open.
- By dragging and dropping a supported file onto the already opened document in the application window, or on the dock icon (Mac only).

ArtPro+ can open PDF and PDF+ files, Normalized PDF files (including PDFPLa files) and ArtPro files. If the opened file is a Normalized PDF or an ArtPro file (opened as Normalized PDF, see below), this will be indicated behind the name of the file in the window title. See [PDF, PDF+ and Normalized PDF](#) on page 43.

When opening a file that contains linked images or placed PDF files that can't be found, you will get the possibility to browse for them. For Normalized PDFs and ArtPro files, clicking **Cancel** will cancel the Open action. For PDF+ files, you will also have the option to unlink or continue without relinking.

Notes on opening files

- By default files are opened in a maximized view. All artwork (including artwork outside the media box) and page boxes are fit in the window. By default, page boxes are hidden.
- If a file takes longer than a second to load, a busy indicator is shown (spinning wheel). Other actions can still be performed while the file is loading.
- If the file you are trying to open is an invalid or corrupt file, you will get an error message.

Known limitations on opening ArtPro files:

- ArtLink values are not updated.

- When opening an ArtPro file in ArtPro+, it is opened (and saved) as a Normalized PDF. However, if conversion to Normalized PDF is not possible, e.g. because of unsupported objects such as placed standard PDF files, placed EPS, PS or RGB images, the file will be converted to and saved as a PDF+ file.
- When opening an ArtPro file as a Normalized PDF, images in PSD, non-bitmap TIFF and Esko CT format that were placed in ArtPro ("Place Picture") will be linked. Also, images that were linked in the ArtPro file as a result of importing a Normalized PDF file with the Keep Esko Links option will remain linked. All other images will be embedded.

Opening image files or Structural Design files (ARD)

If you set the dropdown at the bottom of the File Open dialog to "All supported images" or "All supported Structural Design files", you can also open certain image files or Structural Design files (.ARD). This will result in an empty document, with the selected image file or Structural Design file placed. The size of the document will be the size of the image or Structural Design file. See [Place](#) on page 130 for more information on placing image files, or [Place Structural Design](#) on page 144 for more information on placing Structural Design files.

Opening an MFG file

If you set the dropdown at the bottom of the File Open dialog to "All supported Structural Design files", you can open an ArtiosCAD MFG file. See [Step & Repeat based on an MFG file](#) on page 209

3.2.1. Missing and out-of-date files

When opening a file containing linked files (images, placed PDF or Structural Design file), ArtPro+ will try to find the linked file.

If the file you open is a PDF+ file, the file contains both a link and an embedded version of the placed image, PDF or Structural Design File. ArtPro+ will then also check if the embedded version matches the linked file.

For more information on:

- Images, see [Working with images](#) on page 130
- Placed PDF files, see [Working with Placed Art](#) on page 137
- Structural Design files, see [Working with Structural Design files](#) on page 144

When working with a PDF+ file

In case placed files are not up to date or can't be found, you will get a warning, indicating which files can't be found, or for which files the embedded version doesn't match the linked version.

You can then choose how to handle these files:

- Click **Unlink** to remove the link to the files on disk, and keep using the embedded version.
- Click **Ignore** to use the embedded version of the files but remember the link. You can use this option e.g. if the linked file is temporarily unavailable.
- Click **Browse** to browse to the missing linked files.
- Click **Update** to update the outdated embedded version.

- If there are both missing links and out-of-date embedded versions, you can click **Browse And Update** to combine both.

This check is only done on the current page. This means that when navigating to a different page ArtPro+ will check for missing or out of sync placed files, and another message might be shown.

When working with a Normalized PDF file

When opening a Normalized PDF file, the file doesn't contain an embedded version, so the external image or PDF file will be opened. In case the file can't be found, the link must be resolved for the Normalized PDF to be opened.

Because of that, the complete document is checked upon opening.

For a Structural Design file, the Normalized PDF contains both a link and embedded outlines, but the Normalized PDF does not contain the information needed to check whether the embedded version is in sync with the linked version. When opening the Normalized PDF, the embedded version is used, without any warning about the Structural Design file being missing or out of date. You can still manually browse and update the structural design file.

3.3. Open Recent

You can open one of the 10 most recently opened files by choosing it from the list in **File > Open Recent**.

If you try to open a file from this list that is no longer available (because it was removed, renamed, or an external drive is currently not available) you will be warned about this.

Selecting **Clear Menu** clears all items from the Open Recent list.

3.4. Close Files

You can close a file:

- By selecting **File > Close**
- By clicking the top left red button (Mac) or top right red cross (Windows)
- By using the shortcut **Cmd+W** (Mac) or **Alt+F4** (Windows)

On Windows, when the last window is closed, the application will quit.

On Mac, if you have multiple documents open, you can choose **File > Close All** or the shortcut **Cmd + Alt + W** to close all documents.

3.5. Save Files

You can save your document:

- By selecting **File > Save**.
- By its shortcut **Cmd+S** (Mac) or **Ctrl+S** (Windows).

The **Save** function is always available, even when the document hasn't been edited. If a document was edited, this is indicated by a dot in the close button on Mac, or an asterisk next to the document name in the title bar on Windows.

Note: If an ArtPro file or PDFPlA file was opened, the **Save** function will save the document as a PDF file, next to the original file, with "(imported)" added to the file name.

Another option to save the document, is the **Save as** function, allowing you to save the document with a new name and/or different location:

- By selecting **File > Save as...**
- By its shortcut **Cmd+Shift+S** (Mac) or **Ctrl+Shift+S** (Windows).

ArtPro+ will save Normalized PDF files (i.e. indicated as Normalized PDF next to the file name) as Normalized PDF, and will save other documents (including new documents) as PDF+ files. See [PDF, PDF+ and Normalized PDF](#) on page 43

If you opened an ArtPro file, saving it will write a Normalized PDF file. However, if conversion to Normalized PDF is not possible, e.g. because of unsupported objects such as placed standard PDF files, placed EPS or PS, the file will be converted to and saved as a PDF+.

3.5.1. PDF, PDF+ and Normalized PDF

In ArtPro+, your open file can be a PDF+ file or a Normalized PDF file. If your current file is a Normalized PDF file, this will be indicated behind the name of the file in the window title. The file type depends on the file you open.

Note: If a PDF file becomes a PDF+ file, this only means additional information can be stored in the file. No conversion is done.

If you open ...	the document will be...
a Normalized PDF file or PDFPlA file	Normalized PDF
an ArtPro file (exception: see below)	Normalized PDF
an ArtPro file that can't be converted to Normalized PDF, e.g. because of unsupported objects such as placed standard PDF files, placed EPS, PS or RGB images	PDF+
a regular PDF	PDF+
a new document	PDF+
an ARD or MFG file	PDF+
an Image file	PDF+

When you save your document in ArtPro+, Normalized PDF will be saved as Normalized PDF, while PDF+ is saved as PDF+. There is no way to save a Normalized PDF as PDF+ or vice versa.

Note: Strictly spoken, a regular PDF, ARD file or Image file doesn't become a PDF+ file until you save it. However, since it follows the specifications and behavior of PDF+ files, we consider the open document to be a PDF+ file.

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.
Crosshair position	Saved in file	✗
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"> • Embedded • Linked & Embedded. If a PDF+ file contains image links, a full resolution embedded version of the image will still be saved in the file. 	Images can be <ul style="list-style-type: none"> • Embedded • Linked
Placed Art (PDF)	✓ <ul style="list-style-type: none"> • If the Placed Art is Normalized PDF, it is always embedded. • When placing a Normalized PDF, you can map Technical Inks to specific Processing Step Layers. 	✗ <div style="border: 1px solid black; padding: 5px; background-color: #f0f0f0;"> <p>Note: If you open a Normalized PDF containing Placed Art, this will be recognized and kept with limited editability.</p> </div>

What	PDF+	Normalized PDF
Structural Design	✓	✓ Limited to one Structural Design file, and always using the default Profile
Preflight	Checks and Fixes	Only Checks, no Fixes.

When working with PDF+ files...

- When opening a PDF+ file that contains linked images or linked Placed Art that can't be found, you can choose to browse for them, unlink them or continue to open the file while ignoring the broken link for now.
- When opening a PDF+ file that contains an out-of-date linked image or Placed Art (the embedded version doesn't match the linked version), you can choose to update the embedded version to the linked version, to unlink and keep using the embedded version, or to continue opening the file while ignoring the out-of-date images for now.

When working with Normalized PDF files...

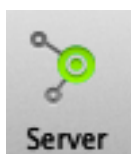
- You will not be able to save the **Page Boxes** setup as long as any errors have not been resolved.
- Dimensions and position for each page box need to be the same for all pages of a Normalized PDF, so if e.g. a trim box is changed on page 1, it is changed on all other pages; if a bleed box is added to page 2, it is added on all other pages.
- All missing links have to be resolved for the file to be opened
- All objects have to be screened

3.6. Automation Engine connection

To connect your ArtPro+ to an Automation Engine, you first need to set up the server connection in the **Server** tab of the **Preferences**. See [Preferences](#) on page 34

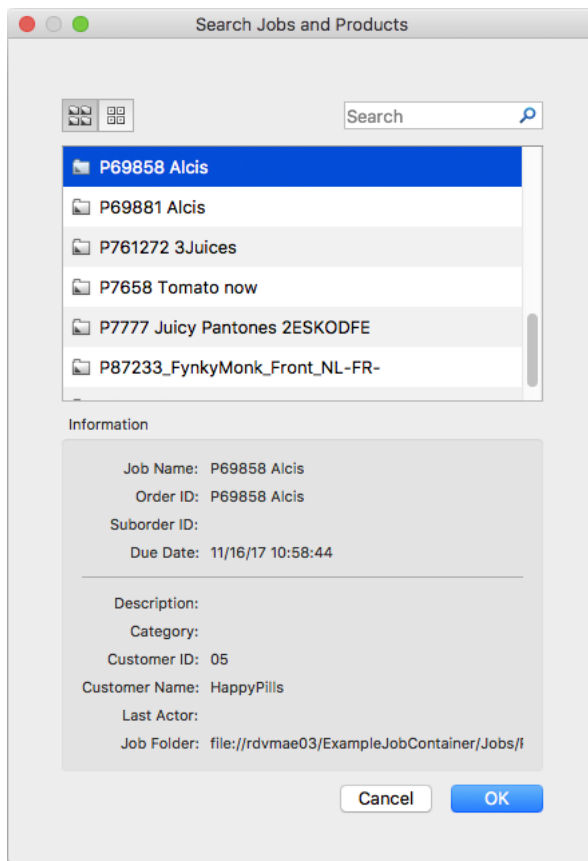
You can make a connection to an Automation Engine by entering the **Server Name** and clicking the **Connect** button. After entering user name and password, a connection will be made with the server.

The toolbar will show a green connection if the connection is up and running . If no connection to the Automation Engine server is available, a red icon is shown. When no Automation Engine is set, the connection icon will be hidden.



Once a connection has been established, you can open and save files directly from and to your Automation Engine Server: the Browse dialog will contain a **Recent Server Places** dropdown,

where you can easily select the latest server locations where you opened or saved a file, and a **Search** button, to open the Automation Engine Search window.



- Use the buttons on top of the window to show Jobs or Products.
- Use the **Search** field to filter Jobs or Products.
- Select a Job or Product to see its details underneath
- Click **OK** to close the Automation Engine Search window, and open the selected Job or Product in the Browse dialog. The corresponding folder will be mounted automatically.

If an open document resides inside an Automation Engine Job, the job name is displayed next to the name of the document in the title bar of the document.

If you are working on a document from an Automation Engine Job, you can use the barcode parameters defined in the Job Setup. See [Barcode properties from Automation Engine Job Setup](#) on page 182

3.6.1. Launch Workflow

If you have an active connection to an Automation Engine server (see [Automation Engine connection](#) on page 45) you can launch your document directly into an Automation Engine workflow.

1. Select **File > Launch Workflow** or use its shortcut **Cmd+L** (Mac) or **Ctrl+L** (Windows).
2. Select the workflow you want to use from the list of public workflows on the Automation Engine you are connected to.

3. Enter any public parameters the workflow requests.
4. Enter a Job ID and Job Part ID. If the file was opened from an Automation Engine job, the Job ID will automatically be entered.
5. Click **Launch**. If the file was modified since the last save, you will be asked to save the file before launching.
6. Check the progress of the launched job using the **Automation Engine Pilot**.

There is currently no Shuttle dialog to show progress of the launched jobs from within ArtPro+.

3.7. Export Gravure TIFF

Export Gravure Tiff is used to output your document directly as TIFF data for gravure printing. It creates one TIFF file per selected separation, for the current page.

You can select **File > Export Gravure Tiff** or use its shortcut **Cmd+Alt+T** (Mac) or **Ctrl+Alt+T** (Windows).

The dialog box contains the following settings:

- Separations:** A list with four items: Cyan (checked), Magenta (checked), Yellow (checked), and Black (checked).
- Resolution:** A text input field containing "200,00 ppcm".
- Anti-aliasing:** A dropdown menu set to "4 pixels".
- Apply on all contents in Step & Repeat files:** An unchecked checkbox.
- Add Noise:** A text input field containing "3%".
- Write skip areas to files:** An unchecked checkbox.
- Threshold:** A text input field containing "280" followed by the text "empty lines".
- Buttons:** "Cancel" and "Export TIFF..." (highlighted in blue).

In the **Separations** list you can define what separations to output. The list shows all separations in the document, and by default unused separations will be enabled. If an empty separation is selected, no output will be generated for that separation.

By double-clicking a separation in this list you can change the name of the separation as it will be used in the file name for the TIFF, e.g. if you want the file name to be "[filename] C.tiff"

instead of "[filename] Cyan.tiff". This doesn't change the actual name of the separation in the document.

The **Resolution** of the TIFF file is shown in the default unit defined in the Preferences, but can be defined in Pixels per inch (ppi), Pixels per mm (ppmm) or Pixels per cm (ppcm). The entered value will be recalculated to the default unit. See [Preferences](#) on page 34

Anti-aliasing can be set to None, 2, 3 or 4 pixels. The higher the value the smoother the result will be, but it will also increase calculation time and needed disk space.

By default, Anti-aliasing is only applied on the one-ups placed in a Step & Repeat file. To apply anti-aliasing on the other content of the S&R file itself (e.g. station numbers or marks), you can enable the **Apply on all contents in Step & Repeat files** option.

Add Noise allows to add a certain percentage of noise to avoid banding.

If **Write skip areas to files** is enabled, empty areas larger than the **Threshold** will be skipped, and a Skip Areas file (.svs) will be written next to the separation file. Using this information, an engraving machine can skip those areas, increasing the engraving process.

Note: Objects in non-printing layers will not be exported, while hidden objects in a printing layer will be.

4. Changing the View

- Files are by default opened in the document pane in a maximized view; this view can be reduced by moving the vertical slider in between the document pane and the side panel, or by resizing the entire application window.
- By default, files are opened at "fit in window" size, fitting all graphic elements (including elements outside of the media box) and all page boxes in the document pane
- Files are always viewed in overprint preview
- Like in all recent Esko applications, technical inks are rendered as opaque

Note: Rotation flags are not taken into account. You can however change the rotation yourself: see [Rotate View](#) on page 53

Changing the view will not change the file itself: all these changes can not be saved in the file.

4.1. Multiple Document Windows

If you have multiple documents open, every document will have a separate window. You can switch the document you are working on in different ways.

- Simply click in a window to activate it
- Select the document you want to activate in the **Window** menu. The active document is indicated with a check mark. Unsaved documents are indicated with a *.
- Use **Cmd + `** (Mac) or **Alt + Tab** (Windows) to cycle through the different windows.

4.1.1. Arrange document windows

If you have multiple document windows open, you can arrange them vertically or horizontally.

- Select **Window > Arrange > Vertical** to place the open document windows next to each other
- Select **Window > Arrange > Horizontal** to place the open document windows above each other

Note: If you use multiple monitors, the document windows are always arranged on the primary monitor, as defined in the operating system's settings.

4.1.2. Synchronize Views

If you have two or more document windows, you can apply the same zoom, pan, and orientation zoom on all document windows by enabling **Synchronize Views**, either by

choosing **Window > Synchronize Views** or by its shortcut **Cmd + Alt + 1** (Mac) or **Ctrl + Alt + 1** (Windows).

4.2. Changing the Zoom factor

4.2.1. Fit in Window

- Shortcut: **Cmd+0** (Mac) or **Ctrl+0** (Windows)
- Menu: **View > Zoom > Fit in Window / Previous**

Fit in Window with Page Boxes hidden:

If the Page Boxes are hidden, **Fit in Window** will center the view and adjust the zoom factor so that all graphics (including elements outside of the Media Box) are visible in the document pane.

Fit in Window with Page Boxes visible:

In most cases, the Crop Box is completely inside the Media box. In that case, **Fit in Window** will fit on the Crop Box. Contents outside the Crop Box will be grayed out.

However, it is possible that the page boxes were defined differently:

- If no Media Box is available, the full Crop Box is shown. Contents outside the Crop Box is grayed out.
- If no Crop Box is available, the Media Box is shown. Contents outside the Media Box is grayed out.
- If the Crop Box is partially outside the Media Box, **Fit in Window** will center and fit on the part of the Crop Box that is inside the Media Box. Other content is grayed out.
- If the Crop Box is completely outside the Media Box, both Media Box and Crop Box are fitted, but all content will be grayed out.

Using the **Fit in Window** function a second time will go back to the previous view (position and zoom), allowing you to toggle between the two views.

4.2.2. Actual Size

- Shortcut: **Cmd+1** (Mac) or **Ctrl+1** (Windows)
- Menu: **View > Zoom > Actual Size / Previous**

Actual Size will set the zoom factor to 100% to get a clear view on the actual size of the document and its elements. Actual Size or 100% means 100% at a fixed resolution of 72ppi - like in Adobe Illustrator.

This action will not recenter the contents of the file but keep the current center point as its center.

Using the **Actual Size** function a second time will go back to the previous view (zoom), allowing you to toggle between the two views.

4.2.3. Zoom to Selection

- Shortcut: **Cmd+Alt+0** (Mac) or **Ctrl+Alt+0** (Windows)
- Menu: **View > Zoom > Zoom to Selection / Previous**

Zoom to Selection displays the selected objects as big as possible in the active window.

Using the **Zoom to Selection** function a second time will go back to the previous view (zoom), allowing you to toggle between the two views.

4.2.4. Zoom In / Zoom Out

- Shortcut for Zoom In: **Cmd++ (plus)** (Mac) or **Ctrl++ (plus)** (Windows)
- Shortcut for Zoom Out: **Cmd+- (minus)** (Mac) or **Ctrl+- (minus)** (Windows)
- Menu: **View > Zoom > Zoom In** and **View > Zoom > Zoom Out**

Zooming in or out using the shortcuts or by clicking will zoom in fixed steps: zooming in multiplies the current zoom factor by 1,414 ($\sqrt{2}$), zooming out by 0,7071 ($1/\sqrt{2}$). This means you can go to double or half the current zoom percentage in two steps. You can for example go from 100% to 141,4% to 200% or vice versa.

The current Zoom level is shown in the window title, next to the file name.

Maximum zoom factor is 100.000%

Minimum zoom factor is reached if the Media Box is displayed at approx. 2 by 2 centimeter.

If the document no longer fits inside the window, horizontal and vertical scroll bars will appear.

For more zoom controls, see [Zoom tool](#) on page 51

4.2.5. Zoom tool

The **Zoom** tool (shortcut: **Z**) can be used to change the zoom factor.

- Click to zoom in
- Alt-click to zoom out
- Click and drag a rectangle to zoom in on the area. The area will also be centered.

You can temporarily use the Zoom function without leaving the currently selected tool using the modifier keys:

- Space+Cmd (Mac) or Space+Ctrl (Windows) to zoom in
- Space+Alt+Cmd (Mac) or Space+Alt+Ctrl (Windows) to zoom out
- Hold the Alt key in combination with the mouse wheel to zoom in or out.

As soon as you release the modifier keys, the selected tool becomes active again.

4.3. Pan tool

The **Pan** tool (shortcut **H** for Pan, or shortcut **Z**, toggling between Zoom and Pan) can be used to move the view by clicking and dragging.

You can temporarily use the Pan function without leaving the currently selected tool using the modifier keys: press and hold Space.

As soon as you release the modifier key, the selected tool becomes active again.

4.4. The Crosshair

The **Crosshair** is a reference point in the ArtPro+ document and can be moved around. By default, the Crosshair is hidden, but its visibility is remembered when quitting and restarting ArtPro+. When visible, its default location is at the upper left corner of the media box.

The center for the linear transformations (rotation, scale, mirror, shear) is the zero point of the activated **Crosshair**. When you deactivate or hide the **Crosshair** the center of the bounding box of the selected objects is used instead. See [Transforming objects](#) on page 92

If the Transform tool is selected, you can also move and snap the bounding box of the selected objects onto the Crosshair by holding the **Cmd** key (Mac) or **Ctrl** key (Windows) while using the **arrow keys**. See [Move](#) on page 94

The Crosshair can be moved and rotated using the **Crosshair** tool (see [Move or rotate the Crosshair](#) on page 52).

To hide or show the Crosshair, you can:

- Use the shortcut **Cmd+R** (Mac) or **Ctrl+R** (Windows)
- Select **View > Hide Crosshair** or **View > Show Crosshair**
- Click the eye or "-" icon in front of **Crosshair** in the **Prepress Layers** section in the Side Panel.

4.4.1. Move or rotate the Crosshair

You can use the **Crosshair Tool** from the Tool Switcher (Shortcut: **R**, toggling with **Cut on Crosshair**, see [Cut on Crosshair](#) on page 53) to move or rotate the Crosshair

- Use the **arrow keys** to move the Crosshair over the fixed **Keyboard increment** distance defined in the preferences, or over 10 times that distance when holding the shift key. See [Preferences](#) on page 34
- Hold the **Cmd+ALT** key (Mac) or **Ctrl+ALT** key (Windows) while using the **arrow keys** to move and snap the Crosshair onto the 9 anchor points on the bounding box of the selected objects. If no objects are selected, the Crosshair will snap to the trim box.

Note: **Cmd+ALT** is also the Modifier for the Crosshair: whatever tool is currently selected, you can hold **Ctrl+ALT** to temporarily switch to the **Crosshair** tool.

- Click in your document to position the Crosshair center
- Click and drag the Crosshair to position it, snapping magnetically to all selected paths. The path the Crosshair is snapping to will be highlighted. The Crosshair will snap to lines, curves and anchor points, even if the crosshair is rotated. Hold the **Ctrl** key (both on Mac and on Windows) while dragging to disable the magnetism.
- Click and drag on the horizontal or vertical line of the Crosshair to move only this line of the Crosshair. The same magnetism is applied as when moving the Crosshair (see above). Hold the **Ctrl** key (both on Mac and on Windows) while dragging to disable the magnetism.
- Hold the **ALT** key and click and drag to rotate the crosshair. A blue circle is shown on the center of the Crosshair, containing the Angle Readout. Also hold down the **Shift** key to constrain the rotation to multiples of 15 degrees.
- Hold the **ALT** key and click on the center of the Crosshair to enter the desired angle for the Crosshair.

4.4.2. Cut on Crosshair

Using the **Cut on Crosshair** tool, you can cut away parts of the selected objects, based on the position of the Crosshair.

1. Select the objects you want to cut.
2. Select the **Cut on Crosshair** Tool from the Tool Switcher or use the shortcut: **R**, toggling with the **Crosshair** tool, see [Move or rotate the Crosshair](#) on page 52
The cursor changes into a pair of scissors.
3. Indicate what quadrant you want to cut away
 - Click the quadrant to cut away the parts of the selected objects in that quadrant.
 - Click and drag multiple quadrants to cut away the parts of the selected objects in those quadrants.
 - Hold the **Alt** and click or drag to **keep** the parts of the selected objects in the selected quadrants, and remove all other quadrants.

4.5. Rotate View

You can rotate the view in multiples of 90 degrees.

- You can rotate the view clockwise by selecting **View > Rotate View > Clockwise** or by its shortcut **Cmd+Shift++ (plus)** (Mac) or **Ctrl+Shift++ (plus)** (Windows).

Note: The shortcut only works using the plus key from the numeric keypad.

- You can rotate the view counterclockwise by selecting **View > Rotate View > Counterclockwise** or by its shortcut **Cmd+Shift+- (minus)** (Mac) or **Ctrl+Shift+- (minus)** (Windows)

If the View is rotated, a compass-like **Rotation indicator** is shown in the bottom right of the document pane, indicating the current rotation



- You can go back to the normal view (no rotation) by selecting **View > Rotate View > No rotation** or by clicking the **Rotation indicator**

4.6. Preview or Outline mode

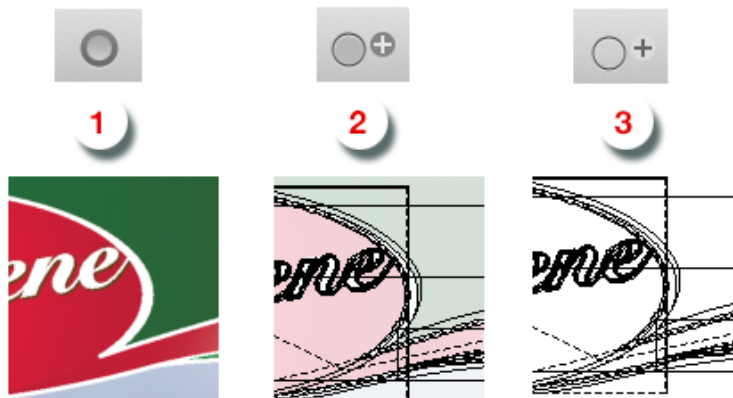
ArtPro+ can displays the document in two modes: **Preview** mode, where the filled version of the file is displayed, or **Outline** mode where only the technical lines of the paths are visible.

Functions can be executed both in preview mode and in vector mode.

To switch between Preview and Outline:

- Use the shortcut **Cmd+Y** (Mac) or **Ctrl+Y** (Windows)
- Select **View > Switch to Preview** or **View > Switch to Outline**
- Using the **View Mode selector** button in the top right of the Side Panel

By default, in Outline mode, you will still see "hinting": a dimmed version of the colored preview below the outlines. You can switch this on or off using the + button next to the **View Mode selector** button when in Outline mode.



1. Preview mode
2. Outline + mode with "hinting"
3. Outline mode without "hinting"

4.7. Hiding objects

Using the **Hide** function, you can hide the selected objects. Hidden paths are no longer visible and cannot be selected nor modified. Still, they are saved with the file, so they will become visible again, when the file is next opened. You can apply this function multiple times, to hide additional objects.

Show All makes all hidden paths visible again. It will deselect all paths in the current job first and then show the hidden paths, which will come back selected. This allows you to check something and then immediately **Hide** them again.

- Select **Object > Hide** or its shortcut **Cmd+3** (Mac) or **Ctrl+3** (Windows)
- Select **Object > Show All** or its shortcut **Cmd+Alt+3** (Mac) or **Ctrl+Alt+3** (Windows)

4.8. Color Management

In ArtPro+ you can have a color managed preview of your job.

To use Color Management, a number of options and functions are available:

- **Color Managed Preview**
- The **Document Profile**
- The **Default Profile** set in the Preferences. See [Preferences](#) on page 34

Color Managed Preview can be switched on and off by choosing **View > Color Managed Preview** or by using its shortcut **Cmd+Alt+Y** (Mac) or **Ctrl+Alt+Y** (Windows).

If Color Managed Preview is enabled, the document will be rendered using the **Document Profile**

- If your document contains an embedded profile, this profile will be used.
- If your document contains a link to a profile that is installed on your computer, this profile will be used
- If your document refers to a profile that is not embedded and not installed on your computer, or if no profile is defined, the **Default Profile** set in the Preferences will be used.

You can change the **Document Profile** by choosing **File > Document Profile**

Note: Installing ArtPro+ does not automatically install any color profiles.

Saving a PDF+ file requires a rendering intent. Therefore, when saving a file in ArtPro+ that is not a Normalized PDF, the Default Profile will be used as Document Profile if no profile has been set yet, and a warning will be shown.

5. Checking and Measuring

5.1. Quality Control

In the **Quality Control** section you can perform some quality control functions:

- Check for highlight **Breakout**: see [Breakout](#) on page 56
- Check the **Total Area Coverage**: see [Total Area Coverage](#) on page 56
- Check your trapping by showing a **Registration Error**: see [Registration Error](#) on page 57
- **Compare** two documents. See [Compare](#) on page 58
- Visualize the used **Screen Sets**. See [Object Screening](#) on page 57

5.1.1. Breakout

A Breakout is an area where the percentage of a single separation is lower than the **First Visible Dot** value. This can be used to track areas that won't show up on print because the values are too low.

Your printer should provide you with the First visible Dot value. The First visible dot is set in the **Limit** field. The value is always rounded off to the closest system value (n/255 in %). You can increase or decrease the value by one system value using the arrow up or arrow down key while in the **Limit** field. You can hold the **Shift** key to increase or decrease the value 10 times faster.

To enable the Breakout preview, select **Breakout** from the Quality Control dropdown list and - if no Eye icon is visible yet, click on the "-" icon in front of "Breakout". Once Breakout is selected and enabled, all areas where a single separation has a value lower than the **Limit** value (but higher than 0%), will be displayed in highlight color. You can define the highlight color in the Preferences: see [Preferences](#) on page 34.

Note: Because breakouts are only highlighted if they are **lower** than (and not equal to) the Limit value but higher than 0%, and because of the rounding off to the closest system value (n/255 in %), the minimum value is 0,8%. When this value is entered, any breakouts that are rounded off to 0,4% will be highlighted. If you also want breakouts of 0,8% to be highlighted, you should enter the next value, i.e. 1,2%.

You can use the Densitometer to measure the densities at a specific location. See [Densities](#) on page 60.

Note: Invisible layers, invisible separations and Technical Inks are not taken into account.

5.1.2. Total Area Coverage

The Total Area Coverage (TAC) is the sum of all separation-densities at a certain point in your document.

To enable the **Total Area Coverage** preview, select "Total Area Coverage" from the Quality Control dropdown list and - if no Eye icon is visible yet, click on the "-" icon in front of "Total Area Coverage". Once the Total Area Coverage preview is enabled, the image in the preview pane will be dimmed and all areas where the sum of the densities is higher than the TAC limit specified in the current Press Setting will be highlighted. You can define the highlight color in the Preferences: see [Preferences](#) on page 34

The **Limit** is the maximal Total Area Coverage that your document may contain. This value depends on the press and the substrate your design will be printed on. Your printer should provide you with the TAC Limit value to use.

You can click inside the Limit field and enter the **Limit** value, or you can use the arrow up key to increase the TAC Limit value or the arrow down key to decrease the value. You can set the value up to 500%. You can hold the **Shift** key to increase or decrease the value 10 times faster.

You can use the Densitometer to measure the densities at a specific location. See [Densities](#) on page 60.

Note: Invisible layers, invisible separations and Technical Inks are not taken into account.

5.1.3. Registration Error

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

The separations are randomly shifted. In fact, all separations are moved exactly 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.

5.1.4. Object Screening

Using the **Object Screening** Preview, you can get an indication of what Screening Set is used on what objects.

The Quality Control section will show a list of all Screen Sets used in your file, each with a different color. Objects using a specific screen set will show in the corresponding color. Areas where multiple screen sets overlap are shown in red.

Using the eye icons, you can make the objects using the selected Screen sets visible or invisible.

For more information on Screening, see [Screening](#) on page 184

5.1.5. Compare

Using the **Compare** function, you can compare the current document with a **Reference file**

1. To enable Compare, select **Compare** from the Quality Control dropdown list.
2. You will automatically be requested to select a Reference file. If **Compare** was already selected, click the ... button to select the reference file.

ArtPro+ will calculate the visual differences. The job will be shown dimmed, with rectangles indicating the visual differences. In the Information Side Panel, you get an indication on the number of areas containing visual differences, along with a notification in case the Trim Box, Media Box or separation list of the two documents don't match.

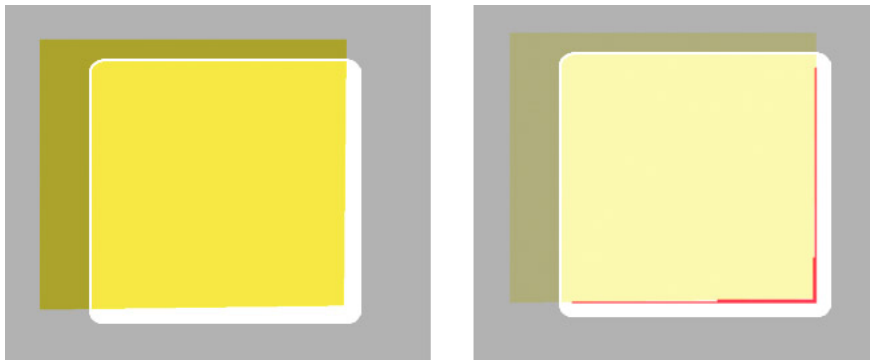


3. Compare the documents:

- Click the eye icon in front of **Compare** to toggle between differences view and normal view.
- Hold the **C** key to temporarily show the reference file instead of the open document. By using this toggle, you can easily see the difference between both documents.

Note: When toggling between the active file and the reference file, the Page Box information (when visible) will be updated. The Layer list and Separation list is not updated, and thus will always show the information of the active document.

- To get a more specific indication of the differences, you can enable **Highlight different pixels**. Instead of a rectangular area, this will highlight the difference in pixels using the **Highlight** color set in the Preferences. The image below shows the difference with the option disabled (left) and enabled (right).



Note: You can select the page of the active document to be compared. However, comparing is always done using the first page of the reference document.

Calculating the differences

When calculating the differences between the open document and the reference document, these rules are followed:

- The two documents are aligned according to the left bottom corner of their trim box
- Visible layers of the current document are compared against all printing layers of the reference document
 - When the visibility state of the layers of the current document is changed, the comparison is recalculated accordingly. This allows you e.g. to disable the trap layer in the current document and check if the artwork of this trapped document still matches that of the untrapped reference document.
- Visible separations of the current document are compared to all separations of the reference document. A difference found only in a specific separation will not be reported if that separation is hidden. Technical inks are not taken into account.
 - When separations are hidden or made visible, the comparison is recalculated accordingly
- If the current document is rotated, the reference document is rotated in the same way

Note:

Even when no visual differences are found, it can happen that the previews look different when toggling between the current document and the reference document. This is typically the effect of a different separation order: When the order of the separations is different, the visual effect on screen may be different as well, e.g. because of opaque inks, or due to color management.

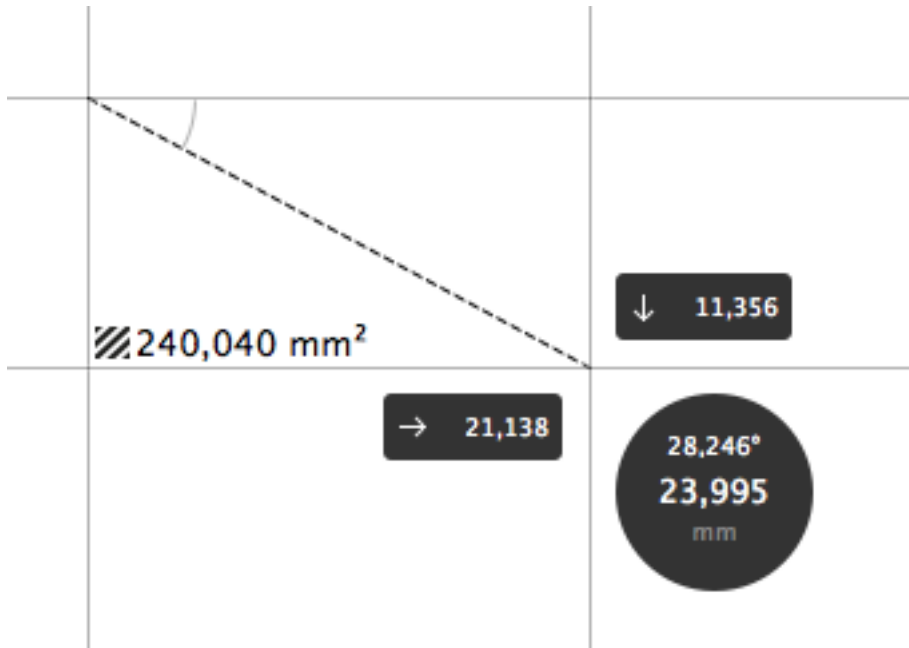
This alone does not affect the output of each individual plate though, so no difference is found. In this case, the following message will be issued: "Separation order is different. Preview on screen may be different."

5.2. Dimensions

The **Dimensions** tool (shortcut: **D**, toggling with Densities) can be used to measure dimensions (distance, angle, area, ...).

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

Note: You can change the zoom and pan without interrupting your measuring, by using the modifier keys. See [Zoom tool](#) on page 51 and [Pan tool](#) on page 52



You will see

- the distance, both vertical, horizontal and in total
- the angle
- the total area of the rectangle. If the area is too small to show the value, you can see it as a tooltip when hovering over the area icon

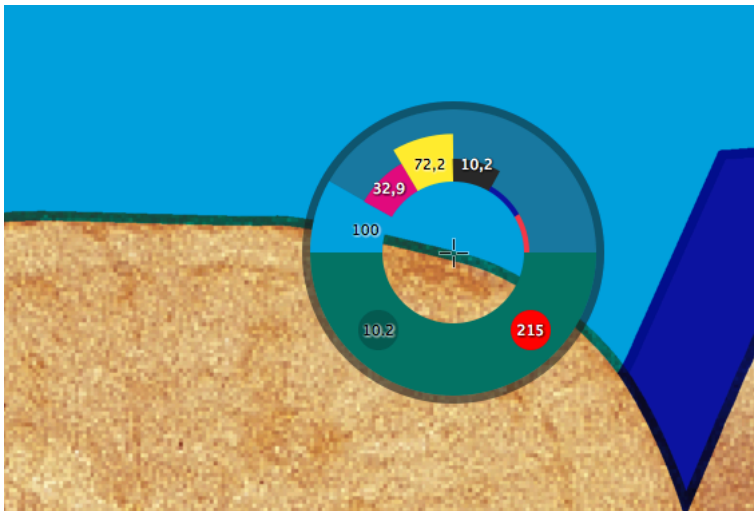
Distances and areas are shown in the units defined in the Preferences (see [Preferences](#) on page 34). However, for distances, you can click in the black circle to toggle between this unit and point (pt). All distances shown will be adjusted accordingly.

4. You can click and drag one of the points to change its location. Click elsewhere to start a new measurement, or use the **esc** key to clear the current measurement.

5.3. Densities

The **Densities** tool (shortcut: **D**, toggling with Dimensions) can be used to measure densities at a specific location.

1. Select the Densities tool
2. Click the point you want to measure



You will see the **Density Wheel** around the measure point (indicated by a crosshair):

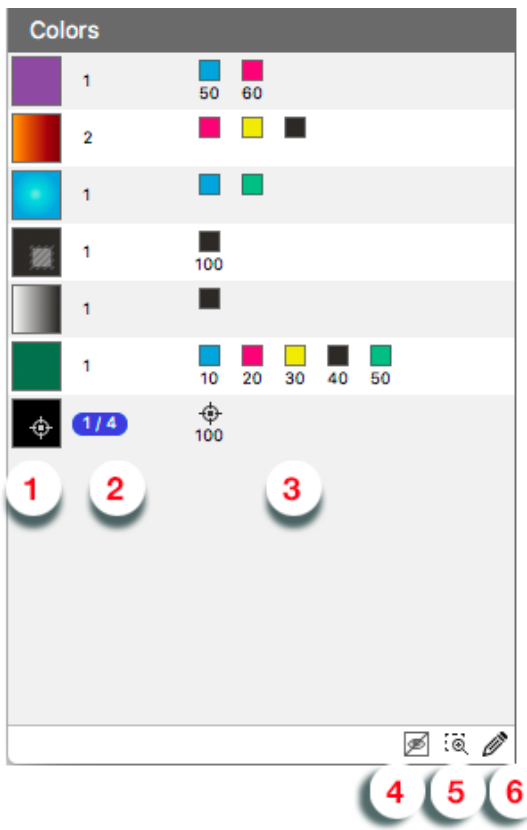
- The upper half of this wheel will show color bars and values for each printing separation in the file. Technical inks are ignored. The height of each bar corresponds to the percentage at the measured point.
- The corresponding values for every separation are also shown in the **%** column of the **Separations** section in the Information Side Panel.
- The bottom half of the wheel will show the color visualization of measured pixel.
 - At the left hand side, the lowest (non-zero) measured value of all printing separations is shown. If this value is below the **Breakout Limit**, the value is shown in a circle in the highlight color, and a colored line at the inner circle of the Densitometer wheel is shown indicating the separation in which the value was measured. See [Breakout](#) on page 56
 - At the right hand side, the total ink percentage of all printing separations and all visible layers at the measured point is shown. If this value is above the **Total Area Coverage Limit**, the value is shown in a circle in the highlight color. See [Total Area Coverage](#) on page 56



Note: Invisible layers are not taken into account. Invisible separations are measured.






3. You can click and drag to get a continuous readout of the measured point.

5.4. The Colors Side Drawer

The **Colors Side Drawer** lists all flat colors and gradients used in the current page of the open document.



1. Every flat color or gradient found in the current page of the document is represented by a color patch. Dynamic Marks are disregarded.
 - Colors are considered the same if all percentage values and overprint settings are the same.
 - Gradients using the same color stops are considered the same, even if they are using different relative positions between the stops, or using a different rotation or positioning.
 - If a color is set to overprinting for one or more separations, the overprint icon  is shown in the color patch.
 - If a color is a **Registration color**, the registration icon  is shown in the color patch.
2. In the second column, you get an indication of the number of times the color is used in the current page of the document.
 - If some of the occurrences are selected, this is indicated e.g. by "1 / 4".
 - If all occurrences are selected, the complete line in the Colors Side Drawer will be selected.
3. In the third column, a separation color patch is shown for every separation used in a specific color.
 - underneath every separation color patch, the percentage for that separation is shown (except for gradients).

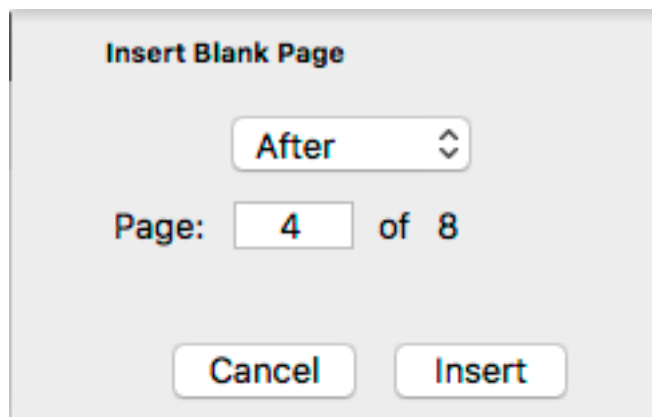
- Hovering over a line in the Colors Side Drawer will show the complete ink names and percentages.
 - If Registration Color is used, the Registration icon  is used. Registration Colors are always shown at the bottom of the list.
 - If the color is used in one or more locked or hidden objects, a lock or eye icon is shown on the right.  
4. If the option **Exclude Hidden Objects** is enabled, colors that are only used in hidden objects will not appear in the list.
 5. Clicking a Color in the Colors Side Drawer will select all (unlocked) objects in the document.
If the **Zoom to Selection**  option is enabled, clicking an entry displays the selected object(s) as big as possible in the active window.
 6. If the option **Show Color Inspector**  is enabled, the Color Inspector section is shown at the top of the Color Side Drawer. You can also disable or enable the Color Inspector by right-clicking in the Colors Side Drawer.
 - Using the Color Inspector you can edit flat colors of the selected objects. The editing is the same as in the Fill & Stroke Inspector, so you can use the shortcuts such as x, t, ... See [Fill Color and Stroke Color Inspector](#) on page 111. If the resulting color matches an existing one, their lines in the Color Side Drawer will be merged. You can use this to reduce the number of different color mixes, and hence the number of lines in the Color Side Drawer.
 - The first line of the Color Inspector indicates how many times the color is used as fill and/or stroke color.
 - Only flat colors can be edited. If your selection contains flat colors and gradients, the Color Inspector will show the flat color(s).

6. Document Settings

6.1. Working with multi-page documents

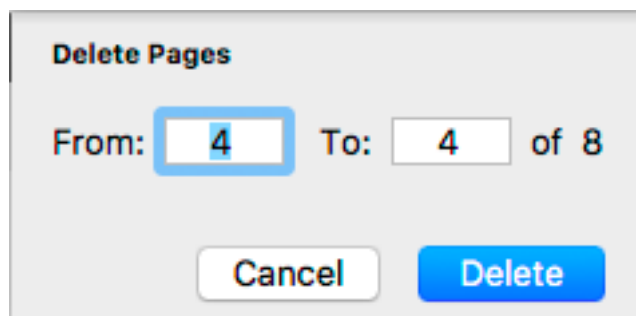
Using **File > Pages** you can manage pages in a multipage document.

- Use **File > Pages > Insert Blank Page...** to insert a blank page in your document. In the **Insert Blank Page** dialog, you can choose where you want to insert the page.



The inserted page inherits the page box and crosshair properties from the current page.

- Use **File > Pages > Delete Pages...** to remove pages from your document. In the **Delete Pages** dialog, you can set the page or range of pages you want to delete.

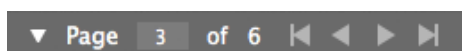


Note: You can not delete all pages of your document.

6.1.1. Navigating a multi-page document

If you open a multi-page document, the first page will be shown. You have different options to navigate through the different pages.

- You can use the menu options in **View > Go To** to go to the first, previous, next or last page.
- You can enter a page number in the page navigator in the side panel to go to a specific page, or use the buttons to go to the first, previous, next or last page.



- You can use the shortcuts:
 - Page Up or Page Down to go to the previous / next page
 - Hold Cmd (Mac) or Ctrl (Windows) and press Page Up or Page Down to go to the first / last page

Navigating to a different page does not affect the selection, zoom level, color management, visibility of page boxes, rotated view, etc.

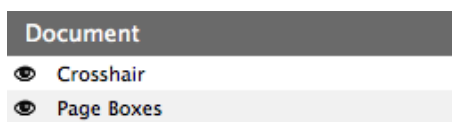
Undo / Redo will navigate to the page where the action is occurring.

Note: When working with a PDF+ file, ArtPro+ only checks the linked external files (Images, Placed Art or Structural Design files) for the current page. This means that navigating to a different page can result in a warning for a missing link or out of date image. See [Missing and out-of-date files](#) on page 41

6.2. Page Boxes

You can toggle the Page Boxes visibility in different ways:

- By selecting **View > Show/Hide Page Boxes**
- Using the shortcut **Cmd+B** (Mac) or **Ctrl+B** (Windows)
- By clicking the Page Boxes eye in the Document section of the side panel.



Page Boxes that are defined in the document are shown in different colors, with a label on the top left corner, indicating the Page Box name and its dimensions. Double-clicking the label will open the **Page Boxes Setup** dialog, with the selected Page Box active. See [Editing Page Boxes](#) on page 66

When Page Boxes are visible, only a section of the canvas is shown, the rest is grayed out. Objects outside the Crop Box are shown dimmed.

The visible section is:

- The part of the Crop Box that is inside the Media Box.
- If no Media Box is available, the full Crop Box is shown
- If no Crop Box is available, the Media Box is shown.
- If the Crop Box is completely outside the Media Box, all content will be grayed out.

The **Fit in Window** function reacts differently if Page Boxes are visible: see [Fit in Window](#) on page 50

6.2.1. Editing Page Boxes

Using the **Page Box Setup** dialog, you can define or edit Page Boxes.

You can open the dialog in different ways:

- Choose **File > Page Boxes Setup ...**
- Use the shortcut **Cmd+Alt+P** (Mac) or **Ctrl+Alt+P** (Windows)
- Double-click the label of one of the Page Boxes. The selected Page Box will be active in the Page Boxes Setup dialog.
- Double-click **Page Boxes** in the Side Panel.

You can edit any page box by selecting it, and changing its values. The changes will be shown in the document immediately, but only accepted if you click **OK**

Note: Holding the **Alt** key will change the **Cancel** button in a **Reset** button. Clicking it will reset all page boxes to the previous accepted settings.

Crop Box, Bleed Box, Art Box

Using the check box in front of the page box name, you can add or remove the page box.

This is only available for Crop Box, Bleed Box and Art Box: the Trim & Media Box are always defined.

If you add a Page Box (e.g. a Crop Box), the Page Box will use the dimensions of the Media Box.

Dimensions

You can edit the size of any Page Box by entering the dimensions. The **Transformation Origin**







buttons allow to set in what direction the Page Box should be modified. If you e.g. select the top left corner, the top left corner of the Page Box will remain unmodified.


Note: You can use calculations when entering dimensions, e.g. by entering "300 mm + 2 inch", the result will be 350,80 mm.

Fit to ...

Using the buttons, you can set the size and position of the page box:

- 
Fit to All: the page box will be modified so it fits all objects in the current document.
- 
Fit to Selection: the page box will be modified so it fits all objects currently selected.
- 
Fit to Trim Box: the page box will match the Trim Box. This is only available for Media Box, Bleed Box and Art Box.
- 
Fit to Media Box: the page box will match the Trim Box. This is only available for Crop Box, Bleed Box and Art Box.

Margins on Trim Box

The Media Box and Bleed Box can be defined by entering a margin on the Trim Box. You can enter a different margin for the top, left, right and bottom, or by enabling the **Lock** button  you can set one margin for all 4 sides.

Errors

Any errors, such as a Trim Box not fully covered by the Media Box, are indicated by a blue circle with a white "i" next to the Page Box name. At the bottom of the dialog, you can find more info on what's wrong, and a link providing a possible solution (e.g. to fit the Bleed Box to the Media Box).

Note: When working on a Normalized PDF, you will not be able to save the page boxes setup as long as the errors have not been resolved.

Multi-page Normalized PDF

Dimensions and position for each page box need to be the same for all pages of a Normalized PDF. If e.g. a trim box is changed on page 1, it is automatically changed on all other pages; if a bleed box is added to page 2, it is automatically added on all other pages.

6.3. Layers

The **Layers** section has two view modes: the default "Layer Overview" mode explained below, and the "Processing Step Layers Overview" mode described in [Processing Step Layers Overview](#)

[mode](#) on page 72. You can switch between modes using the buttons  and .




Note: For Normalized PDF files only the regular "Layers Overview" mode is available, so the buttons will be hidden.

The **Layers** section in Layers Overview mode lists all of the layers that are present in the current document. Groups and individual elements are not listed.

Note: Sublayers are only shown if these sublayers are saved in the PDF file correctly, e.g. sublayers in Adobe Illustrator are not saved in the PDF file.

- Double-click the layer name to change its name.

Note: You can also rename layers from the breadcrumbs or the object browser. See [Renaming objects, groups and layers](#) on page 89

- In the **Visibility** and **Print** column, you can change the visibility and printing state of all layers. See [Visibility, Locking and Printing state](#) on page 69
- The Selection column will show an icon  if some objects in that layer are selected. If all objects in the layer are selected, the icon changes to this: . You can also click the icon in the Selection column to select all objects in that layer.
- Double-click a layer name to rename the layer.
- By clicking the **Move selection to active layer** button  you can move the selected objects to the active layer
- Click the + button to add a new layer. Click the - button to remove the selected layer(s) and their content.
- Select **Delete All Empty Layers** from the fly-out menu to delete any layers that do not contain any objects.
- To reorder layers, click and drag a layer to its new position.
- In case the document you opened contains art that is not in any layer, the Layers list will show "Unlayered Art". You can't select or change this. You can however select from the fly-out menu to put the unlayered art in a Layer. If the document you opened contains both unlayered art and at least 1 layer, you will get a warning recommending to use the **Create Layer from Unlayered Art** option.

Selected layer(s) and Active layer

Some actions, such as deleting or moving, apply on all **selected** layers. For other actions, such as **Move selection to active layer** and actions from an **Action List**, the **active** layer is used.

Selected layers are indicated by a blue background and white text. You can have none, one or multiple layers selected.

- By default no layer is selected.
- You can **select** a layer by clicking the layer name.
- You can command-click (Mac) or control-click (Windows) to add a layer to the selection or remove a layer from the selection.
- You can use shift-click to select a range.

There is always exactly one **active layer**, indicated by a layer name in bold.

- Selecting a layer makes it the active layer.
- If multiple layers are selected, the topmost selected layer will be the active layer.

- If no layer is selected, the topmost layer is the active layer.
- If you apply a regular **Paste**, the pasted objects will be in the active layer. Other Paste methods are also available. See [Cut, Copy and Paste](#) on page 88

6.3.1. Visibility, Locking and Printing state

When opening a file, ArtPro+ will show the visibility and printing states of the layers as they were saved in the file. Non-printing layers will be hidden by default. Locking is never saved in a file, so all layers will be unlocked by default.

Note: When opening PDF 1.5 compliant files (e.g. ArtPro files and Normalized PDF files), invisible layers will always open as invisible and non-printing, regardless of their printing state in the original application.

Automatic Sync

If you change the printing state of a layer, the visibility will be synced to the printing state: printing layers will be visible, non-printing layers will be invisible.

Changing the visibility state will not affect the printing state in any way.

Column icon

You can use the top icons to change all layers at once:

Action	Result
Click the eye icon	Change all layers to "Visible". If this is already the case, this will change all layers to hidden.
Click the lock icon	Change all layers to Locked. If this is already the case, this will change all layers to unlocked.
Click the Printing icon	Change all layers to Printing and Visible. If this is already the case, this will change all layers to hidden and non-printing.
Alt-click the eye icon	Toggle between all layers visible, and the previous state
Alt-click the lock icon	Toggle between all layers locked, and the previous state
Alt-click the Printing icon	Sync visibility to the printing state: printing layers become visible, non-printing layers become invisible.

Layer icons

The eye icons show if a layer is visible or not, the locked icon shows if a layer is locked, and the printing icon shows if a layer is printing or not.

You can change the state of layers in different ways:

Action	Result
Click an icon	Toggle Visibility / Locking / Printing State on or off
Click and drag over multiple icons	Toggle the visibility, locking or printing state for the first layer you clicked, and apply the same state to all layers you drag. If e.g. you click and drag starting on the eye icon of a visible layer, this layer and all others you drag will become hidden.
Alt-click an icon	The selected layer becomes visible / locked / printing, while all other layers become hidden / unlocked / non printing Alt-clicking again will change all layers back to the previous state

Note: Making a layer invisible, will deselect all objects in that layer.

Note: If you do an action on the active layer (e.g. creating an object) while the active layer is locked, you will be asked if you want to unlock the layer.

6.3.2. Processing Step Layers

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 ArtPro+ as **Processing Step Layers**.

Keep in mind however that these Processing Step Layers are only available when working with PDF+ files. Normalized PDF files use Technical Inks instead. See [PDF, PDF+ and Normalized PDF](#) on page 43

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.

Processing Step Layers in the Layers list

Processing Step Layers appear in the Layers list, grouped per type, and the actual Type is shown in the **Type** column.

Layers		Name	Type
<input type="checkbox"/>	<input type="checkbox"/>	Layer 1	Gluing ✓
<input type="checkbox"/>	<input type="checkbox"/>	Diecut layer	Cutting ✓
<input type="checkbox"/>	<input type="checkbox"/>	Layer 2	✓
<input type="checkbox"/>	<input type="checkbox"/>	New Layer	✓

You can change any layer into a Processing Step Layer, or change the type of a Processing Step Layer by clicking the triangle in the **Type** column, and selecting a Processing Step type from the dropdown.

You can change a Processing Step Layer into a normal layer by clicking the triangle in the **Type** column and 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 Messages Side Drawer. You can hover over the warning symbol to get an indication on what is wrong.

You can prevent a number of these issues by using the **Move Objects To** function to create Processing Step Layers. See [Move objects to ...](#) on page 72

Colorants for Processing Step Layers

Separations that are only used in Processing Step Layers 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 Separations list 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 objects to ...

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

1. Select a spot color separation in the separations list.
2. Select **Move objects to** from the fly-out menu underneath the separations list.
3. Select the **Processing Step Layer** you want to use.
4. ArtPro+ will try to move all objects using the selected separation 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). These objects will also be put in overprint (all other separations transparent).
 - Other objects (e.g. objects in a mixed color, images, ...) will not be moved nor changed.
 - If the separation is only used in the Processing Step Layers, it will become a Colorant. See [Colorants for Processing Step Layers](#) on page 71

6.3.3. Processing Step Layers Overview mode

You can click the button  to switch the Layers section to **Processing Step Layers Overview** mode.

This view mode will collect and show layers based on the type: the "Artwork" representing all regular layers, and a line for every type of Processing Step Layer defined in the document. For each type, you will only see one entry, even if multiple layers of that type are defined.

The Processing Step Layers Overview allows to view and change the printing state of all layers of the same type. Changing the printing state will change the visibility accordingly.

In case different layers of the same type have different printing states, this will be indicated by an unequal sign ≠.

Note: As Processing Step Layers are not supported in Normalized PDF, this functionality is not available for Normalized PDF files.

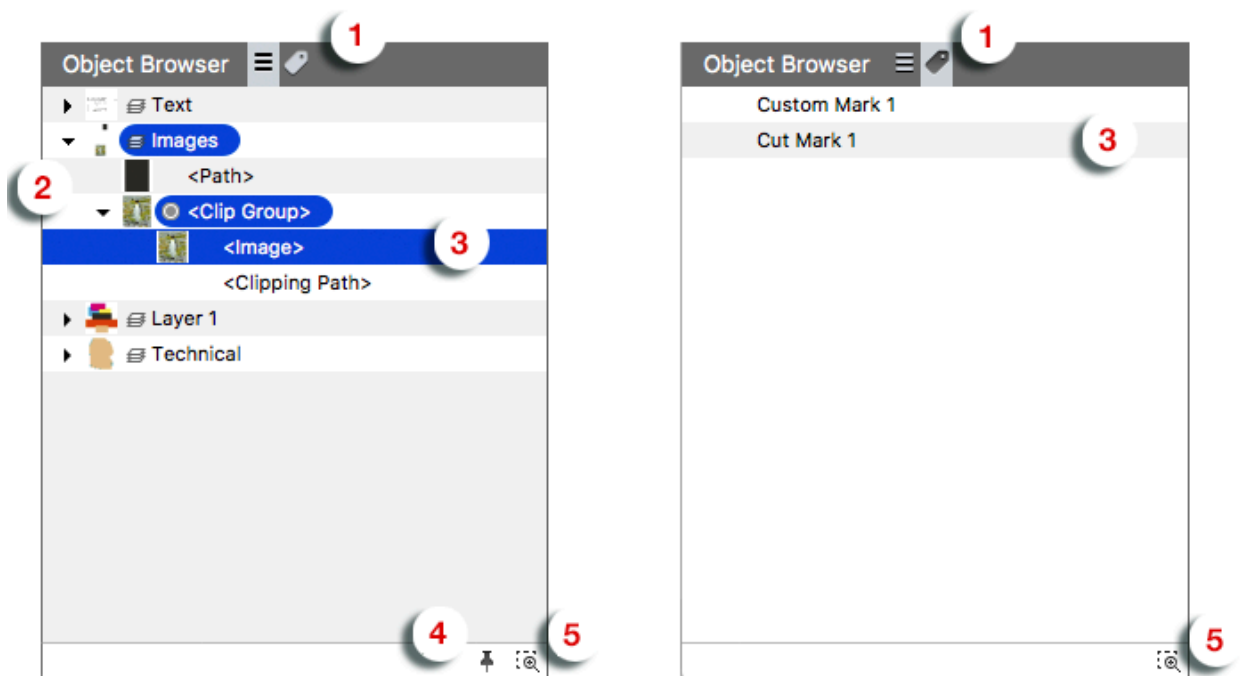
For Placed PDF and Structural Design files, you can use the **Layer Types Inspector** for the same purpose as the Processing Step Layers Overview mode: an overview of all types of layers defined in the document. See [Layer Types Inspector](#) on page 142



6.4. Object Browser



By clicking the **Object Browser** button you can open the Object Browser.

The Object Browser has two modes: the normal Object Browser, that lists all layers, groups and objects in the document, each with their thumbnail, and the Named Object Browser, that shows all Named Objects in the document.



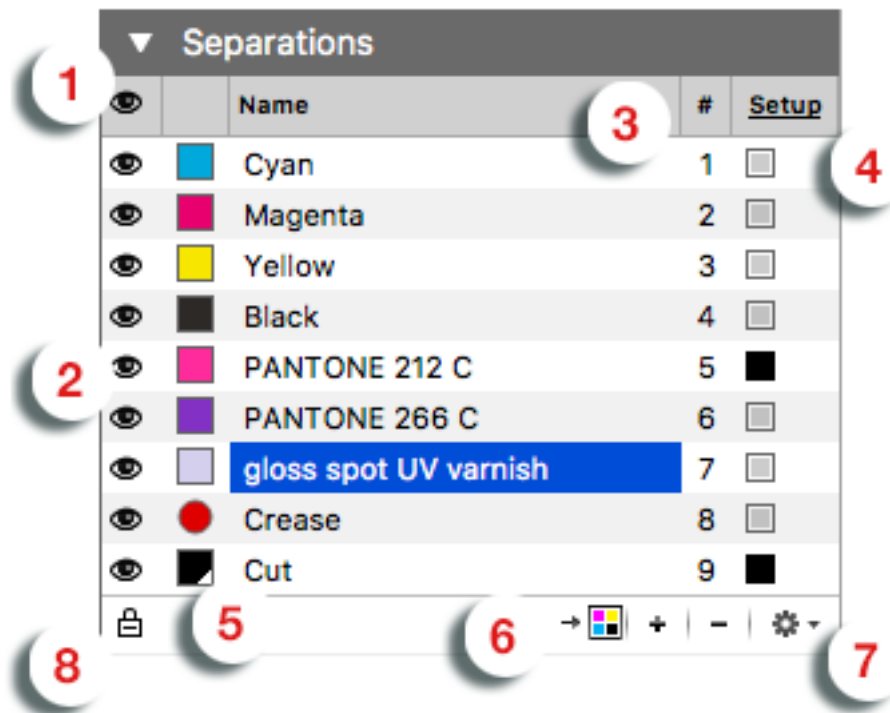
1. Click the Object Browser button  or the Named Object Browser button  to switch between the two modes.
2. Click the triangle in front of a layer or group to expand / collapse it.
3. Click Layers, groups or objects to select them.
 - a) You can select multiple objects by dragging on the items in the browser
 - b) You can add to or remove from the selection by using the Shift or Cmd/ctrl key.
 - c) By clicking and dragging, you can change the position of an object, group or layer. Doing so, you can change the order, take objects in or out of a group or layer, etc. This is not possible in Named Object Browser.
4. Enable the **Keep Expanded** button to keep all layers and groups expanded. When disabled, groups and layers in the object browser automatically expand/collapse to ensure that only

the selected objects are selected in the object browser. This is not possible in Named Object Browser.


5. Enable **Zoom to Selection** to automatically zoom in on the object(s) you select in the object browser
6. Double-click an entry to change the name of the object, group or layer. See [Renaming objects, groups and layers](#) on page 89.
7. Control-click an entry and choose **Show** or **Hide** to change its visibility. You can also change the visibility of Layers in the Layers list (see [Visibility, Locking and Printing state](#) on page 69), and change the visibility of objects and groups using **Show** and **Hide** (see [Hiding objects](#) on page 55)

6.5. Separations

The **Separations** section lists all of the separations that are used in the current document.



1. The top icon shows an eye if all Separations are visible, and a "-" if at least one separation is invisible. You can click the icon to make all separations visible, or (in case all separations are already visible) to hide all separations. You can also Alt-click the header eye icon to toggle between all Separations visible, and the previous state.
2. You can change the visibility of the individual separations in different ways:
 - You can click an eye icon to toggle visibility on or off.
 - You can click and drag over multiple icons to change the visibility of all those separations at once: they all get the same state as the first separation you clicked. For example, if you start clicking and dragging on a visible separation, you make this separation (and all other separations you drag) invisible

- You can Alt-click a separation icon to make that separation visible, and all others invisible. Alt-click and drag makes all of the involved separations visible, and all others invisible. Alt-clicking again changes the visibility of all separations back to the previous situation.
3. The # column shows the index number of the separation in the separations order.
 4. The **Type** column indicates the type of the separations. Clicking **Setup** or any of the Ink Type indicators will open the Separations Setup dialog. See [Separations Setup](#) on page 77
 5. The Color patch shows the color of the separation. It can be a square (Process inks and inks from an Ink Book), square with a white triangle (Custom Ink, see [Separations Setup](#) on page 77) or round (Colorant for Processing Step Layers, see [Colorants for Processing Step Layers](#) on page 71)
 6. The buttons:
 - Use the **Convert to CMYK** button  to convert the selected separation to CMYK. See [Convert to CMYK](#) on page 79
 - Use the - button to remove the selected separation(s). If one of the separation you try to remove is in use, a message will be shown.
- Note:** If your document contains non-white preserving blend modes (Hue, Saturation, Color or Luminosity) you will not be able to remove the process inks.
- Use the + button to add a new printing separation. See [Adding or changing a separation](#) on page 76.
7. The fly-out menu, also accessible by right-clicking a separation
 - You can select **Move Objects to** to move all objects using the selected separation into a Processing Step Layer. See [Processing Step Layers](#) on page 70 and [Move objects to ...](#) on page 72
 - You can select **Convert to CMYK** to convert the selected separation to CMYK. See [Convert to CMYK](#) on page 79.
 - You can select **Replace Separation by** to merge the selected separation with another separation in the list. The selected separation will be removed, and merged with the target separation, which keeps its properties. You can also merge a separation by dragging and dropping it on the target separation while holding the **Shift** key. To see what happens to the screening sets when merging separations, see [Screening when merging separations](#) on page 186
 - You can **Remove Unused Separations**
 - You can open the **Separations setup**. See [Separations Setup](#) on page 77
 8. Using the **Automatic Locking**, you can automatically lock all objects that do not use any of the visible separations. Since locked objects are shown in gray in outline mode, this function can be useful to distinguish between the outlines of objects that are using the separations that you are viewing, and objects that aren't using any of the separations. If the option is enabled, the visibility icon for every separation will switch between visible and locked (instead of invisible). See [Automatic Locking based on the visible separations](#) on page 79

Numeric control

You can press the numbers 1 to 9 on your keyboard, to make the corresponding separation visible, and hide all others. Pressing the same number again will reset all separations to the state they were in before using the numeric keys.

You can press 0 to make all separations visible, and press 0 again to return to the previous state.

Single separation preview

When only one separation is visible, 3 extra icons show up, allowing to inspect a single separation in different modes:



1. Color: the single separation is shown in its own color
2. Positive film: the single separation is shown in black
3. Negative film: the single separation is shown in black, but negative.

Separation order

You can change the separation order by simply dragging and dropping one or more separations onto their new location.

Unused Separations

Separations that are not used in any objects or images are shown as a grayed out separation name in the Separations list, but also in the Screening, Ink Coverage, Fill / Gradient / Stroke Inspector, etc.

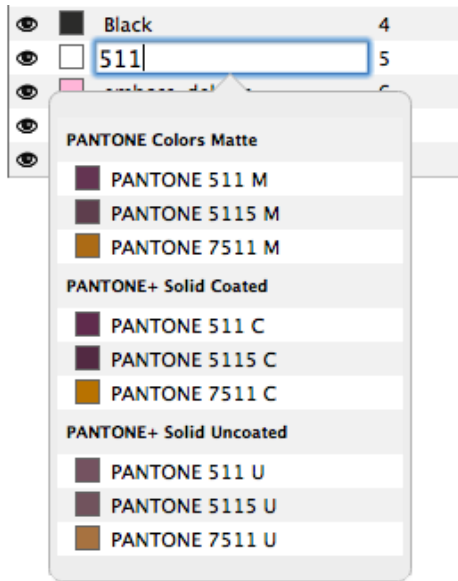
When the document is reopened, unused separations are not listed anymore.

Ink operations on a selection

If you remove separations, replace separations or convert separations to CMYK in the Separations section, the complete document is affected. If you want to remove separations, replace separations or convert separations to CMYK only for the selected objects, you can use the **Recolor** function. See [Recolor](#) on page 119

6.5.1. Adding or changing a separation

1. Click the + button to add a new separation, or double-click an existing separation to change it.
2. You can use the input field as a filter to search and select an ink from the available ink books, in the order defined in the Preferences. See [Preferences](#) on page 34.



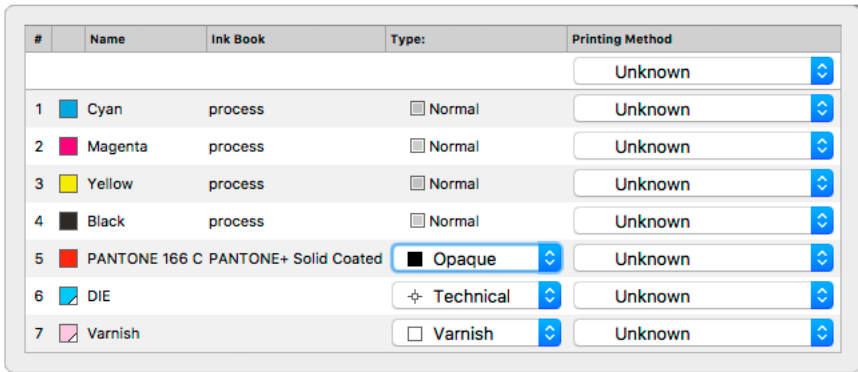
- You can click an ink in the search results to fill in the full name of the ink.
 - Entering the short version of an ink will find the corresponding ink in the available ink books, so it can easily be selected from the list, e.g. "Warm Red" will find the ink "PANTONE Warm Red C" and "reb" will find "PANTONE Reflex Blue C".
 - The search is case insensitive. If you type "green", the list will show both inks containing "green" and "Green" as search result.
3. You can press Enter, Return or Tab to create the ink and immediately start creating another separation. Use the **Esc** key or click outside the edit field to stop creating separations
 - If the ink name doesn't exactly match any ink, hitting Enter will create a custom ink, indicated by a white triangle in the bottom right corner of the color patch.
 - If the ink name exactly matches an ink from the ink book, (e.g. after you clicked an ink in the list), that ink will be used.
 - "c", "m", "y" and "k" are automatically replaced by Cyan, Magenta, Yellow and Black.

Note: Unlike the search (see above), separation names in ArtPro+ are case sensitive, so you can e.g. have both a separation "Green" and "green".

4. When creating a new custom ink, the **Colors** dialog allows to select the preview color for the separation. Changing an existing separation to a (new) custom ink will maintain its color. You can double-click the color patch to change the color for any custom ink.

6.5.2. Separations Setup

Clicking **Setup** or any of the Ink Type indicators in the **Separations** section will open the Separations Setup dialog



The Separations Setup shows all separations in the document.

Column	
1	The index of the separations (#)
2	The color patch for the ink. It can be a square (Process inks and inks from an Ink Book), square with a white triangle (Custom Ink, see below) or round (Colorant for Processing Step Layers, see Colorants for Processing Step Layers on page 71)
3	the ink name
4	the ink book
5	the Separation Type. See below
6	The Printing Method . You can select one of the defined Printing Methods by selecting it in the dropdown, or select Manage Printing Methods to open the Printing Methods preferences. See Preferences on page 34. Select a Printing Method in the topmost dropdown to set the Printing Method for all separations at once.

Ink Types

Normal

By default, process separations are always "Normal".

Opaque inks

Inks that are defined as "Opaque" in the ink book can't be changed to another ink type.

Making an ink opaque will change the rendering of the file. Keep in mind that when using opaque inks, the printing order is very important for a correct preview.

Technical & Varnish inks

Technical and Varnish inks can only be used in Normalized PDF.

Technical inks will be treated as opaque printing separations, and will be saved as such. This means that when sent to a RIP, these separations will appear on the output.


When opening a regular PDF (so not a Normalized PDF) containing Technical inks, a message will be shown warning you about this behavior.

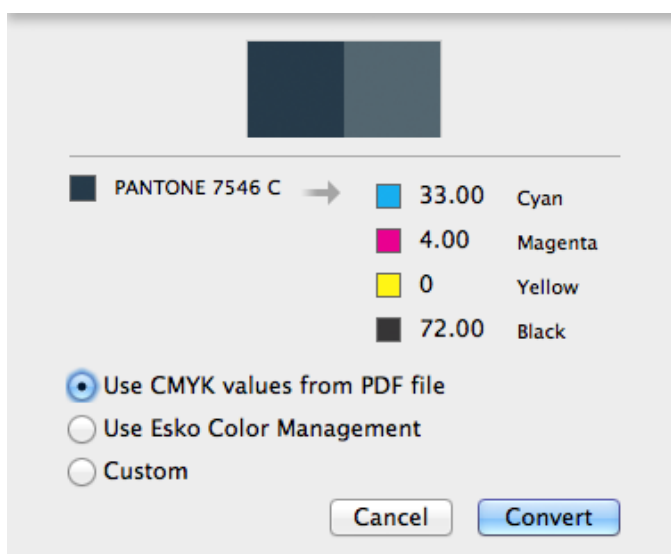
Note: In ArtPro and PackEdge, it is possible to change an opaque ink into a Varnish, which is not allowed in ArtPro+. When opening a file containing such inks, a warning will be shown.

In a PDF+ file, you can not use Varnish or Technical inks. To achieve a Varnish or the equivalent of a Technical ink, you can use Processing Step Layers. See [Processing Step Layers](#) on page 70.

6.5.3. Convert to CMYK

You can convert the selected separation to CMYK. This is not possible for Technical separations in a Normalized PDF.

1. Select the separation you want to convert to CMYK
2. Click the **Convert to CMYK** button →  or select **Convert to CMYK** from the fly-out menu.



3. Select the CMYK values you want to use:
 - the CMYK values that are saved in the PDF file
 - the CMYK values using the Esko Color Management (not available for custom inks)
 - Custom values you can enter yourself.
4. Click **Convert**

6.5.4. Automatic Locking based on the visible separations

By enabling the **Automatic Locking** option at the bottom of the Separations, you can automatically lock all objects that do not use any of the visible separations.

Since locked objects are shown in gray in outline mode, this function can be useful to distinguish between the outlines of objects that are using the separations that you are viewing, and objects that aren't using any of the separations.




- Enabling the option will first reset all locking (i.e. unlock any locked objects), and then lock all objects that do not use any of the visible separations.

- If the option is enabled, the visibility icon for the separations will switch between visible and locked. When the option is disabled, the visibility icon switches between visible and invisible (-), even though objects always stay visible in Outline mode, regardless of the separations they use.
- When the option is enabled, changing the visibility of a separation will reset the locking to match the visible separations, regardless of any manual locking you did in between.
- Editing the document (other than changing the visibility of a separation) will cause the locking to be out of sync. The Automatic Locking will show an open padlock icon. Changing the visibility of a separation, or re-enabling the option will resynchronise all locking.
- If you use the **Unlock All** function (see [Locking objects](#) on page 90), all locked objects become unlocked, and the **Automatic Locking** option is disabled.

Locking objects has the same result as manually locking objects: you can not select locked objects, the Object Browser shows a lock icon, and the outline of the objects are shown in gray in outline mode.

7. Selecting

Objects in the document can be selected by using one of the Select tools:

- The **Group Select Tool**  to select the highest level groups or objects. See [Group Select](#) on page 81
- The **Object Select Tool**  to select lowest level objects and compounds, even inside groups. See [Object Select](#) on page 82
- The **Path Select Tool**  to select paths within a compound.

Note: You can also select using the Transform tool, by clicking anywhere, or dragging outside of the bounding box of the selection. See [Transforming manually](#) on page 93

The selected objects are shown in the selection color. See Display Color for Selections in [Preferences](#) on page 34

Modifier Key

You can use the **Cmd** (Mac) or **Ctrl** (Windows) Modifier Key

- to temporarily switch to the last used Select Tool if another tool is selected.
- to temporarily switch from Group Select to Object Select tool or vice versa.

Select / Deselect All, Inverse


You can also use one of the special **Select** functions:

- Use **Select > Select All** or its shortcut **Cmd+A** (Mac) or **Ctrl+A** (Windows) to select all visible and unlocked objects.
- Use **Select > Deselect All** or its shortcut **Cmd+Shift+A** (Mac) or **Ctrl+Shift+A** (Windows) to deselect everything.
- Use **Select > Select Inverse** or its shortcut **Cmd+Alt+A** (Mac) or **Ctrl+Alt+A** (Windows) to invert the selection: selected items become deselected, unselected objects become selected.

Note: While editing an object using the **Create & Edit Path** tool, Select All, Deselect All and Select Inverse will work on the anchor points of the object. See [Create & Edit Path](#) on page 102

Note: Making a layer invisible, will deselect all objects in that layer.

7.1. Group Select

Group Select  is the default selection tool. You can select it from the Tool Selector, or by its shortcut **V**, toggling with Object Select and Path Select.

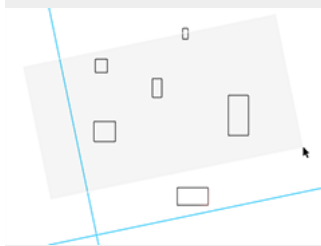
Note:

You can use the **Cmd** (Mac) or **Ctrl** (Windows) Modifier Key

- to temporarily switch to the Group Select Tool if another tool is selected, and if the Group Select tool was the last used select tool.
- to temporarily switch to Group Select if the Object Select tool is selected.
- Click in an object (in Preview mode) or on its path (in Outline mode) to select the highest group the object belongs to. If the object doesn't belong to a group, this will select the entire object, compound path or image plus clipmask.
- Drag a selection rectangle to select everything entirely within the selection rectangle. Objects inside a group will only be selected if all objects in the group are completely in the selection rectangle.


Note:

If the Crosshair is rotated, the selection rectangle you drag will be rotated the same way. See [Move or rotate the Crosshair](#) on page 52



- Click on an empty space in the document to deselect all objects
- Using the Shift key while selecting inverts the selection of the objects. A deselected group or object is selected and vice versa. You can use this to add objects to the selection, or remove them from the selection.


7.2. Object Select

You can select the **Object Select** tool  from the Tool Selector, or by its shortcut **A** or the shortcut **V**, toggling with Group Select and Path Select.

Note:

You can use the **Cmd** (Mac) or **Ctrl** (Windows) Modifier Key

- to temporarily switch to the Object Select Tool if another tool is selected, and if the Object Select tool was the last used select tool.
- to temporarily switch to Object Select if the Group Select tool is selected.
- Click in an object (in Preview mode) or on its path (in Outline mode) to select the smallest path you click on, i.e. an object inside a group, the clip path of an image or the image in a clipped image group.

- If a selected object or group is part of a group or clipped image group, the Object Select cursor will have a plus sign when hovering over it.  Clicking again while in this Plus mode will select the next level group of the clicked group, without changing other selections. You can do this repeatedly to climb higher in the group structure.


- Drag a selection rectangle to select every object entirely within the selection rectangle.

Note: If the Crosshair is rotated, the selection rectangle you drag will be rotated the same way. See [Move or rotate the Crosshair](#) on page 52.

- Click on an empty space in the document to deselect all objects.
- Using the Shift key while selecting inverts the selection of the objects. A deselected group or object is selected and vice versa. You can use this to add objects to the selection, or remove them from the selection.

Note: Live text, compound paths and other Protected objects (such as smartmarks, see [Protected objects](#) on page 107) are considered as 1 single object, even though they may seem to consist of multiple elements. Outlined text can be selected path by path.

7.3. Path Select

You can select the **Path Select** tool  from the Tool Selector, or by its shortcut **A** or the shortcut **V**, toggling with Group Select and Object Select.

Note:


You can use the **Cmd** (Mac) or **Ctrl** (Windows) Modifier Key to temporarily switch to the Path Select Tool if another tool is selected, and if the Path Select tool was the last used select tool.

- In Outline mode, click on a path (e.g. a compound path) to select the smallest path in there, e.g. one of the paths that are part of the compound.

Note: If you click a path in Preview mode, the complete compound the path belongs to will be selected.

- In Outline or Preview mode, drag a selection rectangle to select every path entirely within the selection rectangle.

Note: If the Crosshair is rotated, the selection rectangle you drag will be rotated the same way. See [Move or rotate the Crosshair](#) on page 52.

- If a selected path is part of a compound, group or clipped image group, the Path Select cursor will have a plus sign when hovering over it.  Clicking again while in this Plus mode will select the next level up, e.g. the complete compound or group, without changing other selections. You can do this repeatedly to climb higher in the structure.
- Click on an empty space in the document to deselect all objects.
- Using the Shift key while selecting inverts the selection of the objects. A deselected path or object is selected and vice versa. You can use this to add objects to the selection, or remove them from the selection.

You can delete a path inside a compound, or cut / copy it. All other actions will affect the complete compound. If you paste a path copied this way, it will be part of a new compound.

Note: Live text and other Protected objects (such as smartmarks, see [Protected objects](#) on page 107) are considered as 1 single object, even though they may seem to consist of multiple elements. Outlined text can be selected path by path.

7.4. Selection Breadcrumbs

The Selection Breadcrumbs show the selection in the hierarchy of layers and groups. The Selection Breadcrumbs appear on top of the document window if anything is selected.



1. The left-most element shows the highest level: the **Layer** containing the selection.
2. The left-most highlighted crumb indicates the current **selection**. Other highlighted crumbs are part of the selection.
3. The right-most element can indicate the **origin** of the selection (See below)

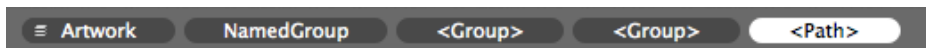
The Breadcrumbs show the grouping structure: every element is a part of the element on its left side. In this example, the Path (3) is part of a Group, which is part of another Group (the current selection). This selected group is part of a named group "NamedGroup", on a layer "Artwork".

Note: Generic objects are shown between brackets, such as "<Group>". Named objects are shown by their name.

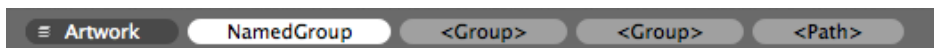
The Origin of the selection

The **Origin** of the selection is the object or path you clicked on using the select tool.

When clicking on an object using the **Object Select** tool, you will select the object you clicked on. The Origin is the same as the Selection.



When clicking on that same object using the **Group Select** tool, the Origin will be the object you clicked on, while the selection will be the topmost group that object belongs to.



You can click each breadcrumb to broaden the selection to a higher group or refine it to a lower group or to the object you initially clicked.

Note:

In some cases, ArtPro+ will not have an origin to show, for example if you add to the selection by clicking while holding the Shift button, or if the origin was lost because of a change in the selection.

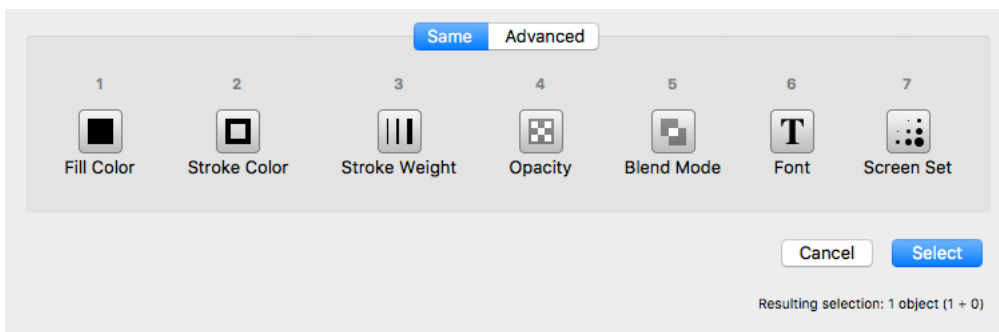
In that case, the breadcrumbs can show **Multiple** if multiple objects or groups within the same group are selected, or **All** if all elements within the group are selected.

You can rename objects, groups and layers by double-clicking a breadcrumb. See [Renaming objects, groups and layers](#) on page 89

7.5. Select Same

Using the **Select Same** tool, you can quickly select objects with the same properties as the current selection.

1. Select one or more objects
2. Choose **Select > Select Same...**, click the **Select** button or use its shortcut **Cmd+U** (Mac) or **Ctrl+U** (Windows) to open the Select Same window.



3. Select one or more criteria to take into account, either by clicking the button or by pressing the corresponding number key (1 - 7)

Note: If the currently selected objects have different values for a criterion (represented by the ≠ symbol) or if the criterion is not available (e.g. font when no text objects are selected), this selection criterion will not be available

4. Click **Select**

All (visible) objects in the document that have the same properties (e.g. the same Fill Color and Stroke Color) as the current selection will be selected.

There is also a quick way to select objects with the same Fill Color or Stroke Color:

- Choose **Select > Select Same Fill Color** or use the shortcut **Cmd+Alt+i** (Mac) or **Ctrl+Alt+i** (Windows)
- Choose **Select > Select Same Stroke Color** or use the shortcut **Cmd+Alt+Shift+i** (Mac) or **Ctrl+Alt+Shift+i** (Windows)

Note:

By switching to the **Advanced** tab, you can select based on specific criteria. See [Select Advanced](#) on page 86.

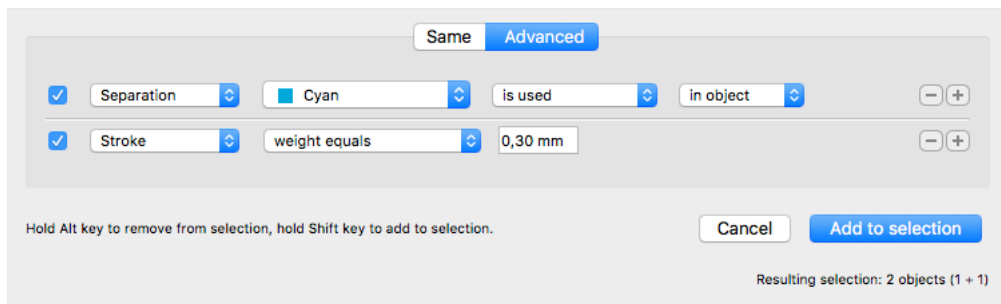
You can switch between the two tabs using the / key.

7.6. Select Advanced

Using the **Select Advanced** tool, you can quickly select objects based on a number of criteria.

1. Choose **Select > Select Same...**, click the **Select** button or use its shortcut **Cmd+U** (Mac) or **Ctrl+U** (Windows) to open the Select Same window, and then select the **Advanced** tab.

Note: You can switch between the two tabs using the / key.



2. Set the criteria using the dropdown menus. Use the plus key to add a line, or the minus key to remove it.

Note: At the bottom right of the dialog you can see how many objects will be selected if the selection is done based on the current criteria, taking into account the Alt or Shift modifier (see below).

3. Click **Select** to (only) select the objects matching **all** of the criteria
 - Hold the Alt key and click **Remove from selection** to deselect objects matching **all** of the criteria
 - Hold the Shift key and click **Add to selection** to add objects matching **all** of the criteria to the current selection

7.7. Select Next Object / Select Previous Object

Select Next Object and **Select Previous Object** offer you the possibility to select objects that are covered by other objects for faster access.

1. While in Preview mode, use the **Object Select** tool, the **Group Select** tool or the **Transform** tool to click on the spot you want to inspect. The topmost object or group will be selected.

2. Choose **Select > Select Next Object** or use the shortcut **Ctrl+Tab** to select the next (not hidden) **object** underneath, regardless of the tool used to made the original object or group.

All Inspectors will show the parameters of the selected object. Every time you press Ctrl+Tab the next object is selected. Briefly, a Point Indicator shows up to indicate on what location the objects are inspected. Once the lowest object is reached, the topmost object of the session is selected again.

3. Choose **Select > Select Previous Object** or use the shortcut **Ctrl+Shift+Tab** to do the same but in the reverse order: every time you click, the **object** on top is selected. When the topmost object is selected, using **Ctrl+Shift+Tab** will select the bottommost object

8. Editing

8.1. Undo and Redo

The **Undo** and **Redo** function allows to undo your changes step by step. The menu items in **Edit > Undo** and **Edit > Redo** will show the next action that can be undone or redone.

To undo or redo an action:

- Select **Edit > Undo [action]** to undo, and **Edit > Redo [action]** to redo the undone action.
- Use its shortcut **Cmd+Z** (Mac) or **Ctrl+Z** (Windows) to undo
- Use the shortcut **Cmd+Shift+Z** (Mac) or **Ctrl+Shift+Z** (Windows) to redo

Note: If the action you Undo or Redo is on a different page in the document, ArtPro+ will automatically navigate to this page. See [Navigating a multi-page document](#) on page 65

8.2. Cut, Copy and Paste

Cut deletes the selected objects from the document and places them on the clipboard.

Copy puts a copy of the selected objects on the clipboard. The original objects are not removed from the file.

All properties of the cut or copied objects are stored in the clipboard. One of the consequences of this, is that if you paste an object, the separations used by that object are added to the document.

Note: When selecting elements of a group without selecting the group as such, the group information is not copied. Partially copied content of sublayers will be copied as a group.

Paste puts the clipboard objects in the active file.

You can paste the cut or copied objects into the same file or into another file. When pasting in another document, inks from the source document that don't exist in the target document will be created.

Quitting ArtPro+ clears the clipboard.

Note: If the **Crosshair** was visible both when applying Cut (or Copy) and Paste, the objects are pasted at the same position relative to the center of the Crosshair. If the Crosshair was hidden when cutting / copying or when pasting, the objects will be pasted at the center of the visible part of the document pane.

In the Edit menu	Shortcut (Mac)	Shortcut (Windows)	Result
Cut	Cmd+X	Ctrl+X	places the selected objects on the clipboard
Copy	Cmd+C	Ctrl+C	copies the selected objects on the clipboard
Paste	Cmd+V	Ctrl+V	pastes the objects on the clipboard in the active Layer, on top of any other objects in that layer.
Paste in Front	Cmd+F	Ctrl+F	pastes the objects directly on top of the topmost selected object and in the same layer as this object.
Paste in Back	Cmd+Shift+F	Ctrl+Shift+F	pastes the objects directly below the lowest selected object and in the same layer as this object.
Paste with Layer Structure	Cmd+Shift+V	Ctrl+Shift+V	pastes the objects in the same layers as they were when copying (the "source" layers).

When pasting with the Layer Structure:

- If a source layer name matches a layer in the current document (case sensitive), the objects will be pasted in that layer, on top of all objects in that layer.

Note: Even if they have the same name, a Processing Step layer and a regular artwork layer will never be merged. A new Processing Step layer or Artwork layer will be created. For more information on Processing Step layers, see [Processing Step Layers](#) on page 70

- When pasting in a Normalized PDF, objects from Processing Step layers are pasted into a regular artwork layer with the same name as the Processing Step layer. For more information on Processing Step layers, see [Processing Step Layers](#) on page 70
- If a source layer doesn't exist in the current document, it will be created on top of the current layers, and have the same printability state as the source layer.
- You can't paste into a hidden layer. If the target layer is hidden, you will get the option to cancel or to make the target layers visible before pasting.

8.3. Handling Objects

8.3.1. Renaming objects, groups and layers

You can (re)name an object, group or layer by double-clicking an entry in the breadcrumbs, by double-clicking an entry in the object browser, or by right-clicking an entry in the object browser and selecting "Rename".

- You can't rename <all> and <Multiple> breadcrumbs
- Clipping paths can not be renamed

- If you change a Layer name, the Layers list is updated accordingly.
- You can't change the name of hidden objects or hidden layers in the Object Browser
- Changing the name of an Image does not change the names shown in the Images browser.
- Named objects created in ArtPro or PackEdge will keep their name in ArtPro+. Object names given in ArtPro+ are recognized by PackEdge, but not when importing back in ArtPro.

8.3.2. Delete

You can delete one or more objects, by selecting them and using the **delete** or **backspace** key.

8.3.3. Hiding objects

Using the **Hide** function, you can hide the selected objects. Hidden paths are no longer visible and cannot be selected nor modified. Still, they are saved with the file, so they will become visible again, when the file is next opened. You can apply this function multiple times, to hide additional objects.

Show All makes all hidden paths visible again. It will deselect all paths in the current job first and then show the hidden paths, which will come back selected. This allows you to check something and then immediately **Hide** them again.

- Select **Object > Hide** or its shortcut **Cmd+3** (Mac) or **Ctrl+3** (Windows)
- Select **Object > Show All** or its shortcut **Cmd+Alt+3** (Mac) or **Ctrl+Alt+3** (Windows)

8.3.4. Locking objects

Using the **Lock** function, you can lock the selected objects. Locked objects are still visible but cannot be selected nor modified. In Outline mode, the outlines of locked objects are shown in gray.

Unlock All unlocks all locked objects and selects them.

- Select **Object > Lock** or its shortcut **Cmd+2** (Mac) or **Ctrl+2** (Windows)
- Select **Object > Unlock All** or its shortcut **Cmd+Alt+2** (Mac) or **Ctrl+Alt+2** (Windows)

In a number of situations, all locked objects become unlocked automatically:

- when saving and reopening the document, since locking isn't saved.
- when switching to a different page of a multipage document
- when entering Edit Opacity Mode, Edit Placed Art Mode or Edit Marks Mode.
- when preflighting the document.
- when applying an Action List (only the affected objects become unlocked)

- when using the Automatic Locking. See [Automatic Locking based on the visible separations](#) on page 79

8.3.5. Arrange objects

Using the **Arrange** function, you can change the order of the objects within their layer or group.

- Select **Object > Arrange > Bring to Front** or its shortcut **Cmd+5** (Mac) or **Ctrl+5** (Windows)
- Select **Object > Arrange > Bring Forward** or its shortcut **Cmd+Alt+5** (Mac) or **Ctrl+Alt+5** (Windows)
- Select **Object > Arrange > Send Backward** or its shortcut **Cmd+Alt+6** (Mac) or **Ctrl+Alt+6** (Windows)
- Select **Object > Arrange > Send to Back** or its shortcut **Cmd+6** (Mac) or **Ctrl+6** (Windows)

Note: An object that is inside a group can only be arranged within the group. If you need to arrange it further up or down in the layer, you can use cut and paste to take the object out of the group.

8.3.6. Group objects

Using the **Group** function, you can create a group of multiple objects, compounds or groups.

Making a Group keeps the color of the individual objects, and their relative order. The complete group is placed at the location (position and layer) of the topmost selected object.

- Select **Object > Group** or its shortcut **Cmd+G** (Mac) or **Ctrl+G** (Windows) to group the selected objects and/or groups.
- Select an entire group and choose **Object > Ungroup** or its shortcut **Cmd+Shift+G** (Mac) or **Ctrl+Shift+G** (Windows) to release the group. All components return to their previous state as path, compound or group.

Note: If you release a group that contains Group Transparency, you will get a warning that the transparency will be lost.

Note: The result of ungrouping can still contain groups. You can apply "Ungroup" multiple times until there are only individual objects left.

8.3.7. Compound

With **Make Compound** all the selected paths will become one single object.

Where paths are overlapping, a look-through window to the background is created (this is an "even-odd" compound path). As a compound is one object, it can have only one color, so when paths with different colors are compounded, they will be filled with the paint style of the object at the bottom of the selection. The compound is placed at the location (position and layer) of the bottommost selected object. If this bottommost selected object is a user named object made in PackEdge, the compound path will take over this name.

- Select **Object > Compound > Make** or its shortcut **Cmd+9** (Mac) or **Ctrl+9** (Windows) to make a compound of the current selection.
 - At least two objects are needed to make a compound path.
 - Both "even-odd" and "non-zero winding" compounds are supported, but compounds made in ArtPro+ will always be "even-odd".
 - The compound will inherit the fill and stroke color, the halftone information and the location of the bottom-most object in the selection.
 - Protected objects (such as unsupported Barcodes, Smartmarks, ...) and live text can not be compounded. If a selection contains Protected objects or text, you will get a warning, and these objects will not be included in the compound. If there are less than two objects remaining in the selection, no compound will be made. See [Protected objects](#) on page 107
 - If the bottom-most object of the compound has a clipping path, this clipping path will stay when compounding and remains a separate object (not part of the compound path). This clipping path will be put in a Clipping Group with the compound path. Clipping paths linked to other objects in the selection are removed.
- Select one or more compounds and choose **Object > Compound > Release** or its shortcut **Cmd+Alt+9** (Mac) or **Ctrl+Alt+9** (Windows) to release all selected compounds.
 - All components will keep the color of the compound after releasing.
 - If a clip was applied to the compound, all released objects will be clipped by this clipping path.

8.4. Editing objects

8.4.1. Transforming objects

You can transform the selected objects in different ways:

- transform manually using the **Transform** tool: see [Transforming manually](#) on page 93
- do a numeric transformation using the **Numeric Transform**: see [Numeric Transform](#) on page 95
- you can do limited transformation by changing values in the **Transformation Inspector**. See [Transformation Inspector](#) on page 97
- You can use **Transform Again** to repeat the last performed transform. See [Transform Again](#) on page 96
- You can use **Align & Distribute**

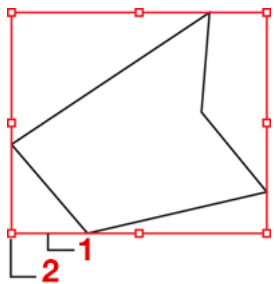
Note: Protected objects (such as unsupported barcodes, Smartmarks, ...) can not be transformed. If a selection contains Protected objects, these objects will not be transformed along with the other (regular) objects, but stay part of the selection. See [Protected objects](#) on page 107

Transforming manually

Using the **Transform** tool, you can manually transform the selected objects.

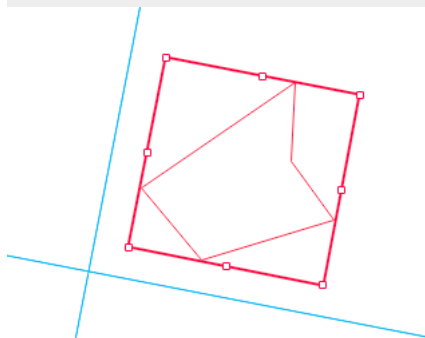
1. Select the **Transform** tool, either by selecting it in the Tool Switcher (see [Changing tools](#) on page 28) or by its shortcut **E**, toggling with **Align & Distribute**. See [Align & Distribute](#) on page 97.

When the Transform tool is active, the bounding box of the selected object(s) is shown (1), with 8 handles on it (2).

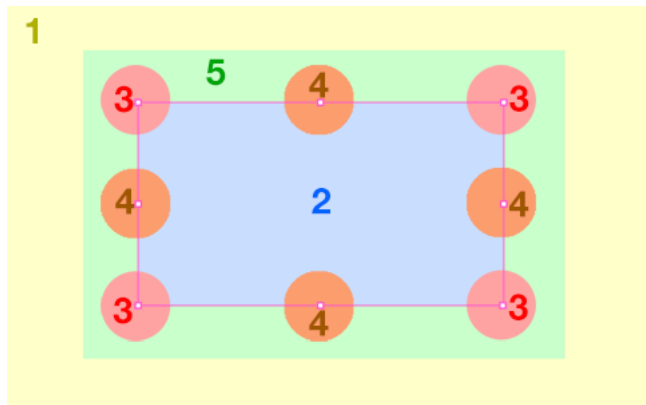






Note:

If the crosshair is rotated, the bounding box will follow this rotation.




2. The **Interactive Transform Tool** can be used for 4 functions : selecting, moving, scaling and rotating. The function depends on the location you click.





- a)  Click anywhere, or drag outside of the bounding box of the selection (1), to use the tool to **select**. The tool works the same way as the regular Select tool. See [Selecting](#) on page 81
- b)  Click and drag inside the bounding box of the selection (2) or use the **arrow keys** to **move** the selection. See [Move](#) on page 94
- c)  Click and drag on one of the corner handles (3) or the center handles (4) to **scale** the selection. See [Scale](#) on page 94
- d)  Click outside but close to the bounding box of the selection (5) to **rotate** the selection. See [Rotate](#) on page 95

Move

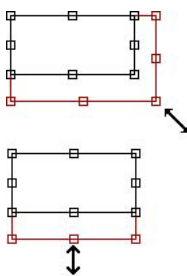
-  Click and drag inside the bounding box of the selection to **move** the selection.
- Use the **arrow keys** to move the selection over the fixed **Keyboard increment** distance defined in the preferences, or over 10 times that distance when holding the shift key. See [Preferences](#) on page 34
- Hold the **Cmd** key (Mac) or **Ctrl** key (Windows) while using the **arrow keys** to move and snap the bounding box of the selected objects onto the Crosshair.
- Hold the **ALT** key to keep the original objects. This will result in copying the objects.

Scale

-  Click and drag on one of the corner handles to **scale** the selection.
-  Click and drag one of the centers of the bounding box borders to **scale** the selection only in vertical or horizontal direction.
- Hold down the **Shift** key to apply proportional scaling.


When visible, the **Crosshair** is used as point of origin. For more information on the Crosshair, see [The Crosshair](#) on page 52

If the Crosshair is hidden, the handle on the opposite site of the bounding box is used as point of origin when scaling:



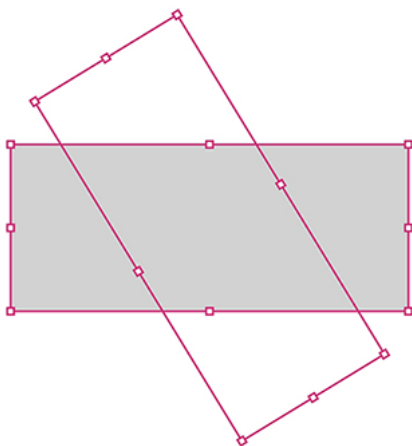
You can use the center of the bounding box as point of origin by holding the **ALT** key, regardless of the Crosshair's visibility state.

Rotate

-  Click outside but close to the bounding box of the selection (5) to **rotate** the selection.
- Hold down the **Shift** key to constrain the rotation angle to multiples of 45 degrees.

When visible, the **Crosshair** is used as point of origin. For more information on the Crosshair, see [The Crosshair](#) on page 52

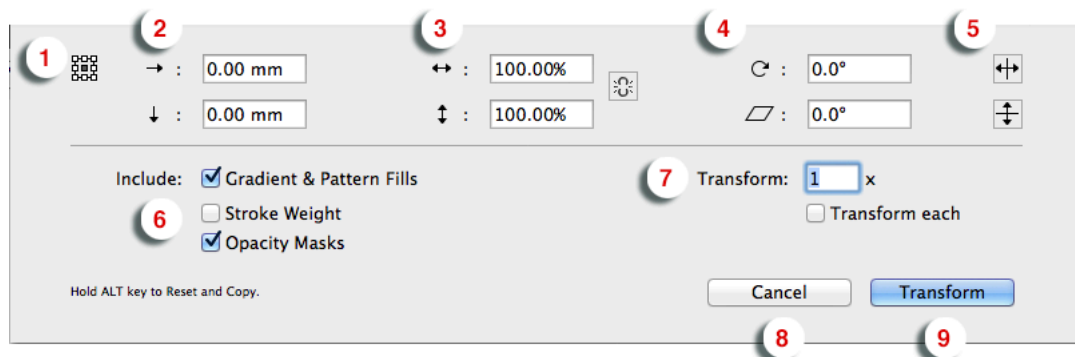
However, if the Crosshair is hidden, or when holding the **ALT** key, the center point of the bounding box is used as center of the rotation.



Numeric Transform

Using the **Numeric Transform** function, you can numerically transform the selected objects.

You can open the **Transform** window, either by choosing **Object > Transform** or by its shortcut **Cmd+Shift+M** (Mac) or **Ctrl+Shift+M** (Windows).

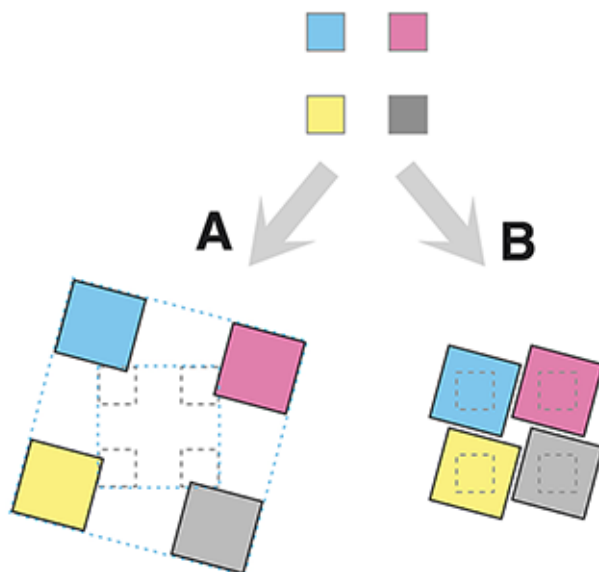


1. Define the **point of origin** for the transformation by selecting one of 9 points. The corresponding point on the bounding box of the selection is used as point of origin.

However, if the Crosshair is visible, the center of the Crosshair is used as point of origin. See [The Crosshair](#) on page 52

2. Define the **Move Distance**
3. Define the **Scaling**. If the **Link** option next to the scaling fields is enabled, scaling will be proportionally.
4. Define the angle for **Rotation** and for **Shearing**.
5. Enable the **Mirror** buttons to mirror the selection vertically or horizontally
6. Define if you want to **Include** the Gradient & Pattern Fills, Stroke Weight and Opacity Masks in the transformation. When disabled, transforming the selection will leave the Gradation & Pattern Fills, Stroke Weight and/or Opacity Masks unchanged.
7. Define the number of times you want to perform the transformation.
8. By default, the selected objects are transformed as one, with one point of origin. If you want to transform each object in the selection individually, each with their own point of origin, you can enable **Transform each**. This option can not be combined with using the Crosshair as point of origin.

The example underneath shows a scaling by 200%, with "Transform Each" disabled (A) and enabled (B)



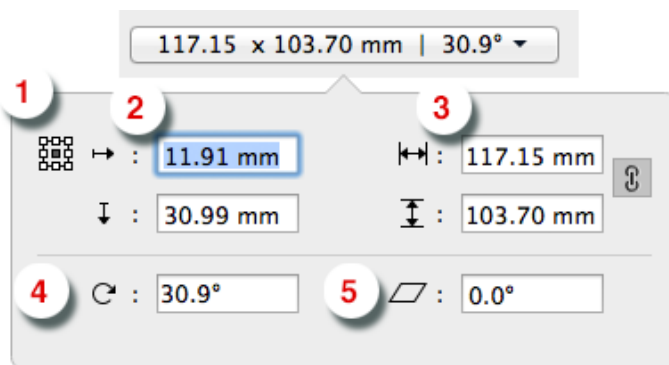
9. Click the **Cancel** button to close the dialog without transforming, or hold the ALT key and click the same button to **Reset** all settings to their default value.
10. Click the **Transform** button to apply the transformation to the selection, or hold the ALT key and click the same button to **Copy** the selection. The selection will be transformed, while the original objects are kept as well.

Transform Again

Select **Object > Transform Again** or its shortcut **Cmd+D** (Mac) or **Ctrl+D** (Windows) to repeat the previous transform.

Transformation Inspector

The Transformation Inspector shows information on the size, position and rotation of the selected objects. You can also use it to do basic transformations on the selection. For more elaborate transformations, you can use the numeric transform function. See [Numeric Transform](#) on page 95.



1. **Attach To** and **Offset**: only available when you're using the Transformation inspector to position a **Grid**. See [Positioning the Grid](#) on page 208
2. The **reference point** on the bounding box of the selection used to determine the position (see below) and when changing the size or rotation while the crosshair is hidden.
3. The **position**, horizontal and vertical, of the center of the crosshair to the selected reference point. If the crosshair is not visible, the top left corner of the mediabox is used instead. You can move the selected objects by entering a different distance.
4. The **size** of the selection. You can scale the selection by entering a different size. If the two values are linked, changing one value will also change the other. The center of the crosshair is used as point of origin. If the crosshair is hidden, the reference point is used instead.
5. The **angle** of rotation of the selection. You can rotate the selection by entering a different angle. The center of the crosshair is used as point of origin. If the crosshair is hidden, the reference point is used instead.
6. The **shear** angle of the selection. You can shear the selection by entering a different angle. The center of the crosshair is used as point of origin. If the crosshair is hidden, the reference point is used instead.
7. If the selected object is a Mark, you can also set the **Attach To** dropdown. See [Mark positioning](#) on page 216

Note: When selecting multiple objects with different rotation or shearing angle, these fields will show "≠".

Align & Distribute

The Align & Distribute functionality can be used to horizontally or vertically align or distribute a number of objects.

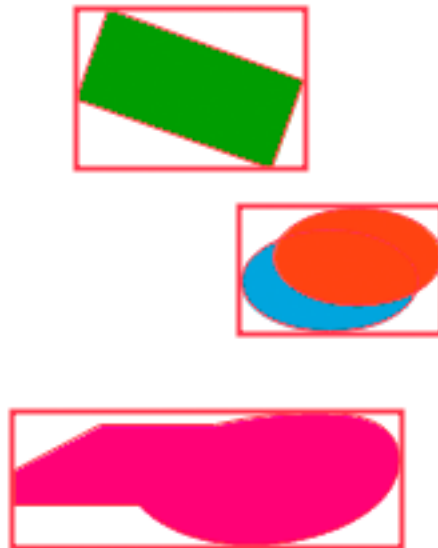
1. Select the **Align & Distribute** tool, either by selecting it in the Tool Switcher (see [Changing tools](#) on page 28) or by its shortcut **E**, toggling with **Transform**. See [Transforming manually](#) on page 93.

When the Align & Distribute tool is active, the Align & Distribute buttons are shown at the bottom of the workspace.

2. Select the objects you want to align or distribute.

Note: You can use any of the select tools, or the **Align** tool itself. This works the same as the **Group Select** tool.

When the Align & Distribute tool is active, a red box is shown on every top level object (a complete group, a single object, a clipping group, ...) indicating the bounding boxes that will be used for the Align or Distribute.



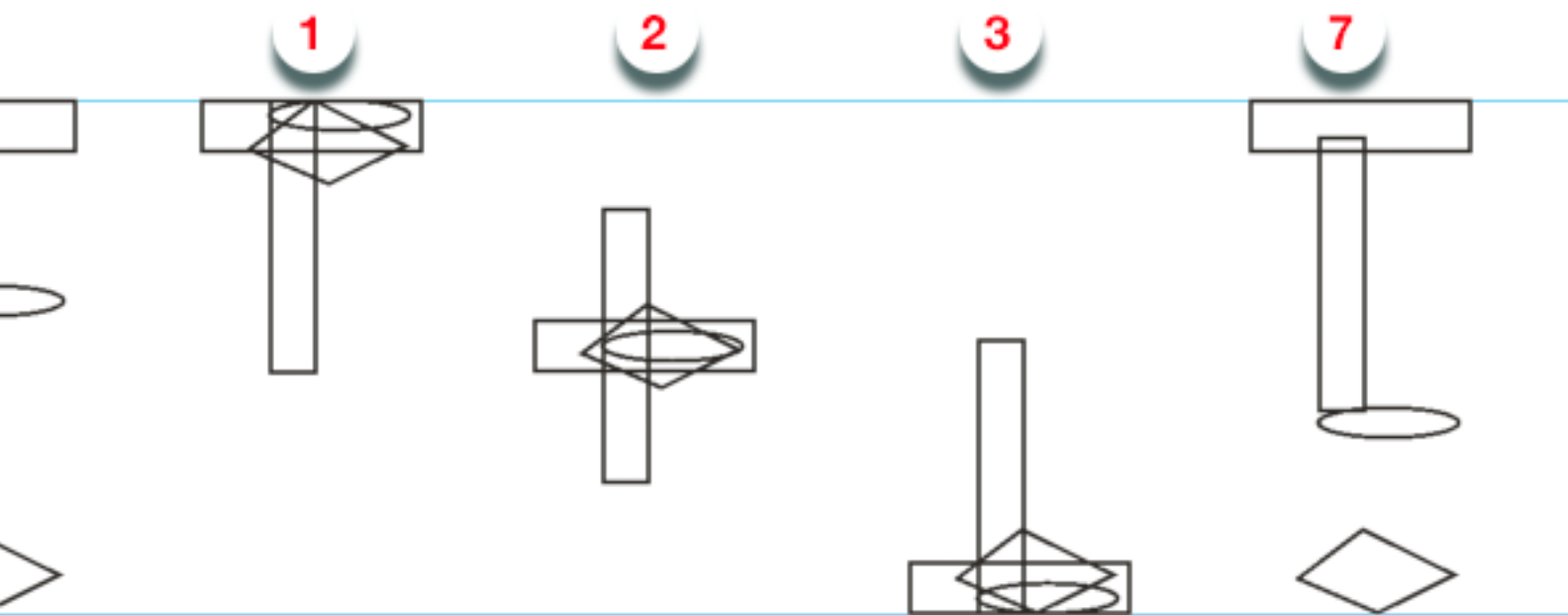
3. Click the button to apply the corresponding Align or Distribute:



- 1. Align vertically on top
- 2. Align vertically centered
- 3. Align vertically on the bottom
- 4. Align horizontally on the left

- 5. Align horizontally centered
- 6. Align horizontally on the bottom
- 7. Vertical Distribute Center
- 8. Vertical Distribute Space
- 9. Horizontally Distribute Center
- 10. Horizontally Distribute Space

The image underneath shows the original objects on the left, and the result of the vertical Align & Distribute tools (1, 2, 3, 7 and 8).



If an Align or Distribute function would give no result with the current selection, the button will be disabled. For example:

- If you have less than 2 objects selected, all **Align** buttons will be disabled
- If you have less than 3 objects selected, all **Distribute** buttons will be disabled
- If the selected objects are already aligned or distributed (e.g. all objects are centered horizontally) the corresponding button is disabled, regardless of whether the align or distribute was done using the Align & Distribute function or not.

Note: The **Align & Distribute** function takes the rotation of the crosshair into account. See [Move or rotate the Crosshair](#) on page 52

8.4.2. Clipping Mask

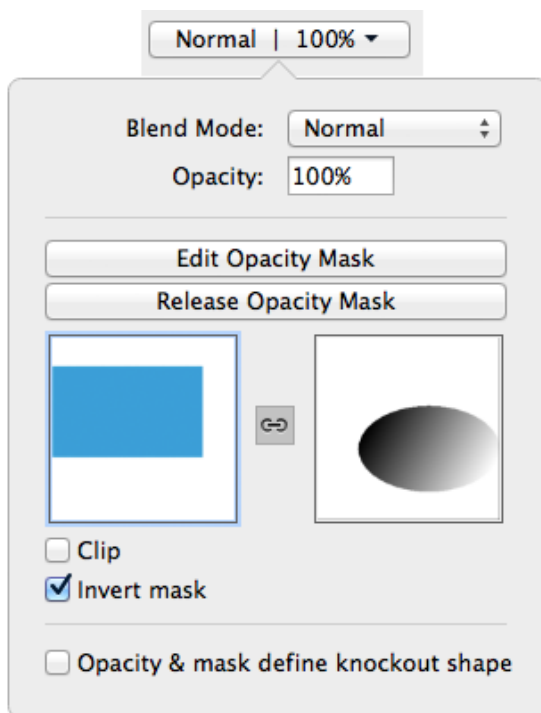
With **Clipping Mask** you can set or release Clipping Masks.

- Select **Object > Clipping Mask > Make** or its shortcut **Cmd+7** (Mac) or **Ctrl+7** (Windows) to make the topmost object as Clipping Mask for all objects underneath.
 - At least two objects are needed to make a clipping mask.

- Protected objects must be expanded first to be included in the clipping mask.
- All selected objects will be placed in a "Clip Group". The group will be positioned at the place of the second topmost object (the highest object apart from the object or group used as clipping mask).
- In outline view or when selected, the Clipping Path object will be shown using a dashed line.
- Select one or more Clip Groups and choose **Object > Clipping Mask > Release** or its shortcut **Cmd+Alt+7** (Mac) or **Ctrl+Alt+7** (Windows) to release all selected Clipping Masks.
 - All components will get their original state, and the clipping mask object becomes a regular object but without any fill or stroke.

8.4.3. Opacity Masks

If you select an object with an Opacity Mask, the **Transparency Inspector** (see [Transparency Inspector](#) on page 118) will show a number of extra options.



- The **Edit Opacity Mask** button. See [Edit Opacity Masks](#) on page 101
- The **Release Opacity Mask** button. See [Make and Release Opacity Masks](#) on page 101
- A **Preview** of the originals without opacity mask, and of the opacity mask itself.
- The **Link** option in between both previews. If the link is disabled, any transformation (move, scale, ...) applied on the selection will not change the opacity mask. If it is enabled, all transformations (move, scale, ...) will be applied to the opacity mask as well.
- If the **Clip** option is enabled, the masked objects will become completely transparent outside the boundaries of the Masking object.

- The **Invert Mask** option reverses the luminosity values of the masking object, and so also reverses the opacity of the masked objects.

Make and Release Opacity Masks

With **Opacity Mask** you can set or release Opacity Masks.

- Select **Object > Opacity Mask > Make** or click the **Make Opacity Mask** button in the Transparency Inspector to set the topmost object (or group) as Opacity Mask for all objects underneath.
 - At least two objects are needed to make an opacity mask.
 - All selected objects will be placed in an "Opacity Group". The group will be positioned at the place of the second topmost object (the highest object apart from the object or group used as opacity mask).
 - Making an Opacity Mask is not possible if Clipping paths (and not the Clipping Group) are selected.
- Select one or more Opacity Groups and choose **Object > Opacity Mask > Release** or click the **Release Opacity Mask** button in the Group Transparency Inspector to release all selected Opacity Masks.
 - All components will get their original color back, and will be assigned the default screening after releasing.

Edit Opacity Masks

You can edit an opacity mask without the need to release and remake it, using **Edit Opacity Mask**.

- Select an Opacity Mask group
- Select **Object > Opacity Mask > Edit**, click the **Edit Opacity Mask** button in the Transparency Inspector or double-click the mask thumbnail in the Transparency Inspector.

ArtPro+ will switch to Edit Opacity Mask mode. This means that:

- Only the contents of the opacity mask is editable
- In Preview mode, the objects in the opacity mask are shown opaque, while in the background a dimmed version of the document is still visible.
- In Outline mode, only the outlines of the opacity mask objects are shown. In Outline with hinting mode, the document is also visible.
- If you hold the **Y** key, you get a preview of what the document looks like with the edited Opacity Mask. If you release the Y key, you return to Opacity Mask editing.
- Functions not relevant for Object Mask editing will not be available. For example Layers, Quality Control, Separations are hidden, Page boxes can be viewed but not edited, etc.
- The document Separations list is replaced by the opacity mask Colorants list, showing the inks only used in the opacity mask under edit. This can be edited totally independent of the document's Separations list.
- The opacity mask colorants are converted to CMYK for visualization purposes to match the output on the RIP. The Densities tool behaves accordingly.

- While in Edit Opacity Mask mode, you can not undo actions that were done before starting the opacity mask editing.
- If you are done changing the Opacity Mask, you can leave Edit Opacity Mask mode by clicking **Back to Document** in the breadcrumbs or in the Side Panel.

8.4.4. Creating and editing paths

Create & Edit Path








Using the **Create & Edit Path** tool, you can create new paths or change the path of the selected object.



Note: The path tools can only be used to edit paths and compound paths. Images, Placed Art, text, barcodes and Protected objects (such as unsupported barcodes, Smartmarks, ...) can't be edited. See [Protected objects](#) on page 107

1. Select the **Create & Edit Path** tool, either by selecting it in the Tool Switcher (see [Changing tools](#) on page 28) or by its shortcut **P**, toggling with **Split and Retrace** and **Cut Path**. See [Split and Retrace](#) on page 103 and [Cut Path](#) on page 104.

When the Create & Edit Path tool is active, the anchor points and handles on the selected path will become visible.

2. The **Create & Edit Path** tool can be used for several functions : create new paths, move or remove anchor points, etc. The function depends on the location you click.



- a)  Click anywhere in the document (except on an existing and selected path) to start creating a new path. Clicking will create a starting point, click and drag will immediately add handles to it.
- b)  ... With an endpoint of an open path selected, click to add a point. Click and drag to immediately add handles to it,
- c)  With one endpoint of an open path selected, click the other endpoint to close the path.,
- d)  + Click on a path segment to add an anchor point.
- e)  Click on an anchor point to (de)select it. Hold the Shift key to select multiple anchor points.
- f)  Hold the Alt (Mac) or Option (Windows) key and click and drag to select multiple anchor points.
- g)  Click and drag selected anchor points to move the anchor point(s). Hold down the shift key to constrain the movement to vertical, horizontal or over 45 degrees.

- h) Double-click an anchor point to convert it between an anchor point with handles (smooth point) and an anchor point without handles (corner point).
- i) Hold the **Command** (Mac) or **Control** (Windows) key and use the arrow keys to move the anchor points onto the crosshair, using the bounding box of the selected anchor points
- j)  If a selected anchor points has handles: click and drag one of the handles to move both handles. Hold the shift key to only modify the length of the handle, without changing the direction
- k)  If a selected anchor points has handles: click and drag one of the handles while holding the Alt key to only modify the one handle instead of both.
- l) While editing an object using the **Create & Edit Path** you can use some of the select functions on the anchor points of the object
 - Use **Select > Select All** or its shortcut **Cmd+A** (Mac) or **Ctrl+A** (Windows) to select all anchor points of the object.
 - Use **Select > Deselect All** or its shortcut **Cmd+Shift+A** (Mac) or **Ctrl+Shift+A** (Windows) to deselect all anchor points.
 - Use **Select > Select Inverse** or its shortcut **Cmd+Alt+A** (Mac) or **Ctrl+Alt+A** (Windows) to invert the selection: selected anchor points become deselected, unselected anchor points become selected.

Split and Retrace

Using the **Split and Retrace** tool, you can retrace a part of the path of the selected object, or you can split the path.


Note: The path tools can only be used to edit paths and compound paths. Images, Placed Art, text, barcodes and Protected objects (such as unsupported barcodes, Smartmarks, ...) can't be edited. See [Protected objects](#) on page 107


1. Select the path you want to edit.
2. Select the **Split and Retrace** tool, either by selecting it in the Tool Switcher (see [Changing tools](#) on page 28) or by its shortcut **P**, toggling with **Edit Path** and **Cut Path**. See [Create & Edit Path](#) on page 102 and [Cut Path](#) on page 104.
3.  Click a starting point on the path.
4. Draw the new part of the path
 - a)  Click to add an anchor point. Click and drag to create an anchor point and immediately add handles to it.

Note: To add an anchor point close to the original path without closing the retrace, hold down the **Alt** key.

- b) You can edit already created anchor points using the same tools as in Edit Path, e.g. to add or edit handles, move anchor points, etc. See [Create & Edit Path](#) on page 102

- c) Hold down the **Shift** key to constrain the newly drawn line or Bézier curve by an angle of 45 degrees. If the Crosshair is rotated, this rotation is added to the constrain angle.
- d) Undo the last drawn anchor point by using the **Delete** key.

5.  Click on the original path to define the end point of the retrace.

6.  Click the part of the shape you want to keep (Retrace) or drag over both parts to keep them both (Split).

Note: Since there aren't two parts to choose from when you are retracing an open path, this step will be skipped. You can solve this by closing the path first: see [Close Path](#) on page 106.




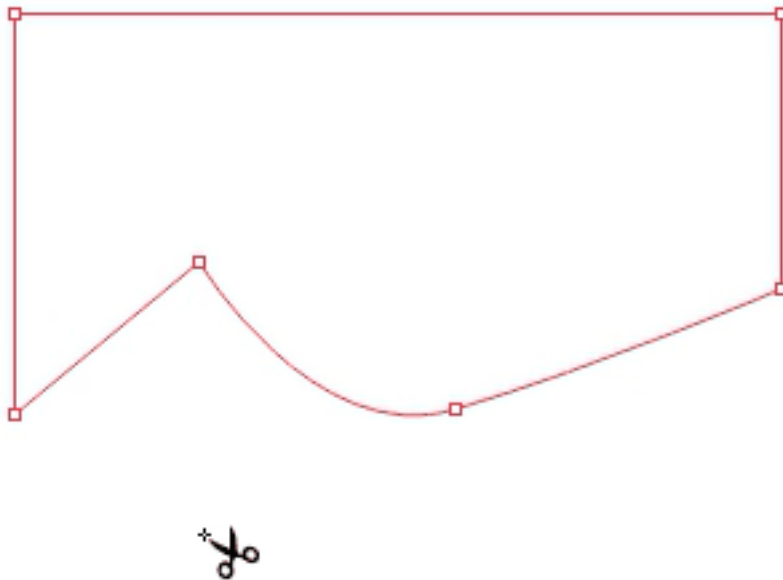
Note: If you apply Split & Retrace on an open path, you can't decide the part of the shape you want to keep, nor can you apply a split.

Cut Path

Using the **Cut Path** tool, you can cut the path of the selected object. This will create two end points at the place where you cut. Cutting a closed path will result in an open path, cutting an open path results in two open paths.

Note: The path tools can only be used to edit paths and compound paths. Images, Placed Art, text, barcodes and Protected objects (such as unsupported barcodes, Smartmarks, ...) can't be edited. See [Protected objects](#) on page 107

1. Select the path you want to edit.
2. Select the **Cut Path** tool, either by selecting it in the Tool Switcher (see [Changing tools](#) on page 28) or by its shortcut **P**, toggling with **Edit Path** and **Split and Retrace**. See [Create & Edit Path](#) on page 102.
3.  Click on the selected path where you want to cut it.
 - A Circle will indicate where the path(s) will be cut. When hovering over an object that can't be cut (barcodes, marks, images, ...) no circle indicator is shown.
 - The Cut Path tool will snap to the selected path, but also to intersections of the path with the Crosshair and to intersections with other paths (even with unselected paths).
 - You can temporarily disable this snapping by holding down the Alt key.
4. When you click, the selected object(s) will be cut
 - The path becomes an open path, part of a compound.
 - If you click the intersection of two selected paths, both paths will be cut.
 - If you cut a path with a dashed stroke, the dashing pattern can be affected, since a new starting point was created.

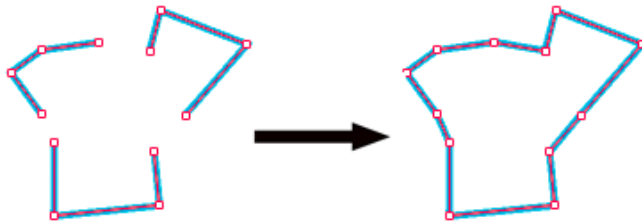


You can close the resulting open path(s) using the **Create & Edit Path** tool, or using **Join Paths** or **Close Paths**. See [Create & Edit Path](#) on page 102, [Join Paths](#) on page 106 or [Close Path](#) on page 106

Join Paths

If the selection contains one or more open paths, you can join all selected open paths into one closed path by choosing **Object > Path > Join Paths** or by using its shortcut **Cmd+J** (Mac) or **Ctrl+J** (Windows).

The end points closest to each other will be connected using a straight line.

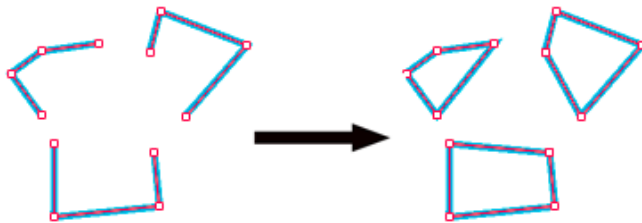


Note: If you have only one path selected, using **Close Path** and **Join Path** will give the same result. See [Close Path](#) on page 106

Close Path

If the selection contains one or more open paths, you can close them by choosing **Object > Path > Close Path** or by using its shortcut **Cmd+Alt+J** (Mac) or **Ctrl+Alt+J** (Windows).

All open paths will be closed individually, by connecting their end points using a straight line.



Note: If you have only one path selected, using **Close Path** and **Join Path** will give the same result. See [Join Paths](#) on page 106

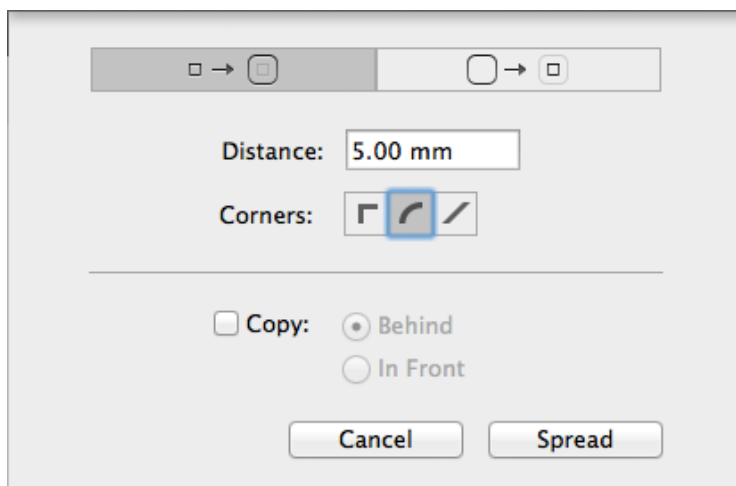
8.4.5. Spread / Choke

Using the **Spread / Choke** function, you can enlarge (Spread) or reduce (Choke) the selected object(s).

1. Select the objects you want to spread or choke

Note: Spread / Choke is not supported on images, barcodes, text and Protected objects. If your selection contains unsupported objects, you will get a warning when spreading / choking. If your selection only contains unsupported objects, Spread/Choke will be disabled.

2. Open the **Spread / Choke** window by choosing **Object > Spread/Choke** or by its shortcut **Cmd+Shift+T** (Mac) or **Ctrl+Shift+T** (Windows)



3. Using the buttons on the top, choose between **Spread** and **Choke**
4. Enter the **Distance** to be used
5. Select how the sharp corners should be handled:
 - **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 Distance, then the corner will be cut off (beveled). If it is less than 4 times the Distance, the corner will be left as it is.
 - **Round:** a round cap will be placed at all corners.
 - **Beveled:** this will cut sharp corners off.
6. Enable **Copy** if you want to keep the original object as well as the spread / choke.
 - Select **Behind** if you want to place the spread/choke object underneath the original (default for spreading).
 - Select **In Front** if you want to place the spread/choke object on top of the original (default for choking).

8.4.6. Protected objects

Protected objects (or "High-level objects" as they were called earlier) are objects saved in the PDF file, using "Private Data": specific information about the object, written in the PDF file by the PDF file creator. Common examples are

- Unsupported Barcodes: see [Barcodes](#) on page 147
- Unsupported live text (not in a text box)
- Smartmarks
- Unsupported images.

In ArtPro+, it is not allowed to change these Protected objects: you can not transform them, or include them in a compound. See also [Transforming objects](#) on page 92 and [Compound](#) on page 91

Note: Unsupported images are marked as Protected objects, but they can be transformed.

You can however **expand** a Protected object. See [Expand](#) on page 108

Note: Expanding is not recommended for unsupported images

Expand

Protected objects (see [Protected objects](#) on page 107), barcodes (see [Barcodes](#) on page 147), Marks (see [Marks](#) on page 214), Forms, Placed Art (see [Working with Placed Art](#) on page 137) and Structural Design files (see [Working with Structural Design files](#) on page 144) can be expanded.

To expand all expandable objects in the selection:

- Choose **Object > Expand**
- Click the **Expand** button in the Inspector bar.

Expanding these objects will replace them by regular objects (e.g. a Mark can be replaced by a number of rectangles or pieces of text, the placed art in a Form becomes editable) in a group.

Note: The result of expanding can still contain expandable objects. You can apply "Expand" multiple times until the object is completely expanded.

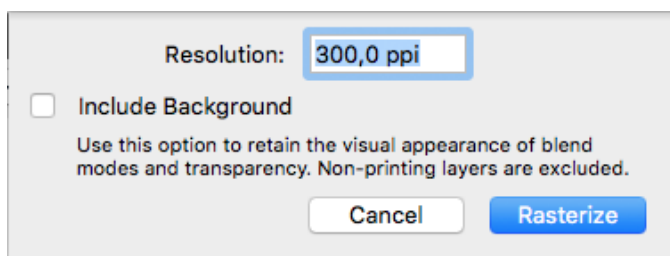
By doing so, the objects become fully editable, but lose the information used to create them.

8.4.7. Rasterize ...

Using this function, you can replace the selected artwork by an image.

1. Select the objects you want to rasterize, and select **Object > Rasterize ...**

The **Rasterize** window will open.



Note: The number of created images depends on the locations of the selected objects in the object browser: selecting a non-consecutive set of objects creates multiple images. In that case a warning will be shown in the Rasterize window, showing the number of images that will be generated, and advising to group the selection to avoid this.

2. Set the **Resolution** for the image to be created
3. Select **Include Background** to rasterize the background into the image, so blend modes and overprint are kept. If the option is disabled, only the selected objects will be in the image, and the background of the image will be transparent, and blend modes and overprints will be disregarded.
4. Click **Rasterize** to create the rasterized image, replacing the selected objects.

Note: During Rasterizing, 2% noise is applied.

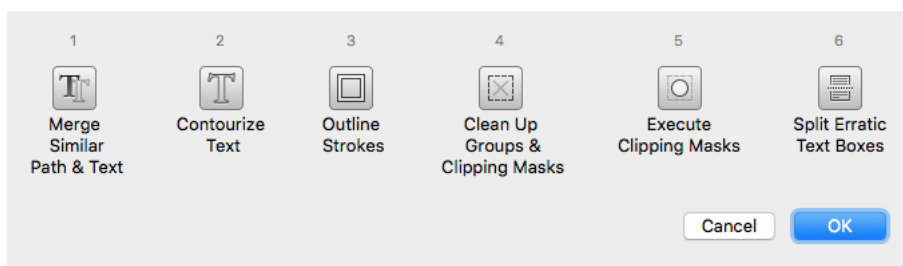
8.4.8. Clean

Clean combines a number of functions to clean up, improve or modify your artwork. The different functions are described separately:

- [Merge similar paths and text](#) on page 109
- [Contourize Text](#) on page 128
- [Outline Strokes](#) on page 110
- [Clean up Groups and Clipping Masks](#) on page 110
- [Execute Clipping Masks](#) on page 110
- [Split Erratic Text Boxes](#) on page 111

You can use every function individually by selecting it in **Object > Clean**, or you can combine them using the **Clean** dialog.

1. Select the objects you want to clean.
2. Choose **Object > Clean > Show Clean Dialog...**, click the **Clean** button or use its shortcut **Cmd+Shift+C** (Mac) or **Ctrl+Shift+C** (Windows) to open the Clean window.



3. Select one or more Clean functions to apply, either by clicking the button or by pressing the corresponding number key (1 - 7)
Depending on the selection, some functions can be disabled.
4. Click **OK**

Merge similar paths and text

In some situations (e.g. to make a combination between CMYK and spot color), a path or text box can be composed of different identical objects (shape, size and position) on top of each other. For example, a rectangle containing a CMYK color, and an identical object on top, containing a spot color percentage in overprint.

The **Merge similar paths and text** function allows to combine such objects into one object, whereas the fill will be merged. In the example described above, that would be one object combining CMYK and the spot color fill.

1. Select the objects & text boxes you want to apply the function on.
2. Select **Object > Merge similar paths and text**

The redundant objects or text objects will be removed, and the remaining object or text box will get the merged fill color. A message will be shown indicating how many objects or text boxes were cleaned up.

Note: Merging will only be done if this will make no difference to the final result. For example with different blend modes or screening, merging will not be done.

Outline Strokes

Using this function, you can replace stroked objects by a group consisting of a path (the fill object) and compound path (the outlined) stroke.

1. Select the stroked object you want to edit
2. Select **Object > Clean > Outline Strokes**

Outline Strokes can also be applied from the **Clean** dialog. See [Clean](#) on page 109

Note: Outline Strokes doesn't work on stroked text. You can however combine contourizing the text and outlining the strokes from the **Clean** dialog.

Clean up Groups and Clipping Masks

To remove redundant groups and clipping masks (e.g. a group as sole component in another group) you can use the **Clean up Groups and Clipping Masks** function.

1. Select the objects & groups you want to apply the function on.
2. Select **Object > Clean up Groups and Clipping Masks**

The redundant groupings and clipping masks will be removed, and a message will be shown indicating how many groups and/or clipping masks were removed.

Note: Named groups will not be removed.

Execute Clipping Masks

Using this function, you can replace object & clipping mask combinations, and create new simple objects where possible, without causing any visual difference. Objects are cropped on their clipping mask, while the clipping path itself and anything that was clipped away is removed. During the process, affected strokes and live text will be contourized.

Images, patterns and Dynamic Marks remain untouched

1. Select at least one clip group you want to execute
2. Select **Object > Clean > Execute Clipping Masks**

Execute Clipping Masks can also be applied from the **Clean** dialog. See [Clean](#) on page 109

Split Erratic Text Boxes

In certain PDF files, improper line endings in the PDF code can result in the combination of multiple overlapping, non-consecutive or rotated lines of text into one single text box. ArtPro+ will honor this text box, but it will be hard to edit.

If you try editing such a text box, you will be given the option to split it into multiple text boxes. You can also split using the **Split Erratic Text Boxes** option

1. Select at least one text box you want to split
2. Select **Object > Clean > Split Erratic Text Boxes**



A message will inform you how many text boxes were split, and what the resulting number of text boxes is.

Split Erratic Text Boxes can also be applied from the **Clean** dialog. See [Clean](#) on page 109

8.5. Changing the Fill and Stroke

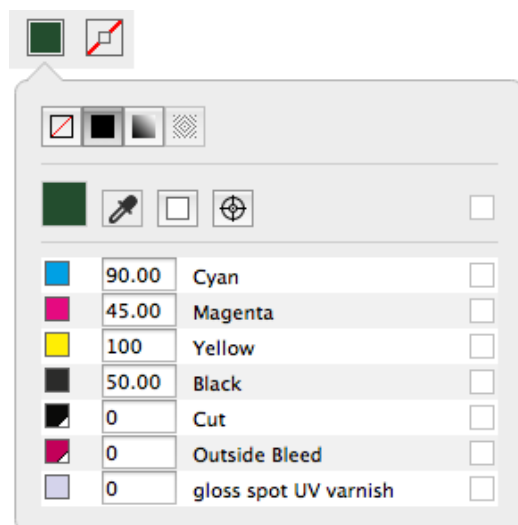
8.5.1. Fill Color and Stroke Color Inspector

When one or more objects are selected, the Inspector will show 2 color patches: one for the **Fill**

 and one for the **Stroke** . If all selected objects have the same Fill or Stroke, the color patch will give a representation of the Fill or Stroke color. Otherwise, it will show the ≠ symbol.

You can use the shortcut **Cmd+I** (Mac) or **Ctrl+I** (Windows) or click the Fill color patch to open the **Fill Inspector**.

You can also use the shortcut **Cmd+Shift+I** (Mac) or **Ctrl+Shift+I** (Windows) or click the Stroke color patch to open the **Stroke Inspector**.

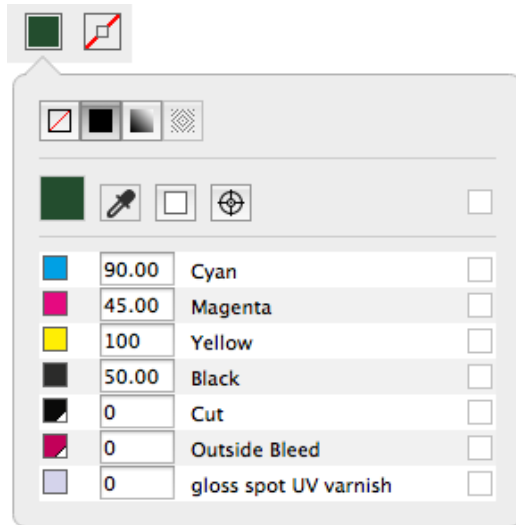


The buttons on top of the dialog are:





- **None** : the object or stroke is empty, and thus completely transparent.
- **Color**: a flat color. See [Flat Color](#) on page 112.
- **Gradient**: a gradation between two colors. See [Gradient](#) on page 113.
- **Pattern**: see [Pattern](#) on page 115

Note: You can toggle between None, Color and Gradient by using the shortcut **Cmd+I** (Mac) or **Ctrl+I** (Windows).

Flat Color



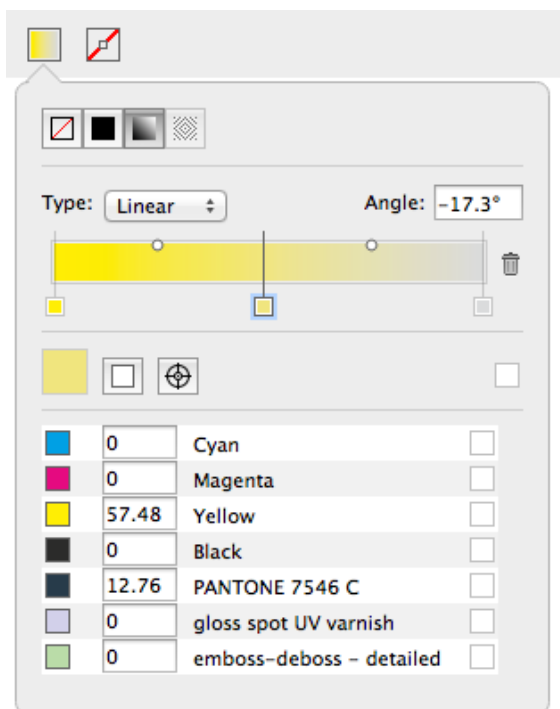
Below the color patch is a list of the current separations, and the percentage for each separation.

- Enter the percentage for every separation to change the color. You can enter a value, or use one of the shortcuts:
 - a) Enter **a** followed by a value, to set all separations to that value.
 - b) enter **x** to set the value to 100%, or enter **ax** to set all values to 100%
 - c) Click the color patch to set the value for that separation to 100%. Clicking it again will switch it between 0% and 100%.
- Click the **Color Picker**  or use the shortcut **i** (while the Inspector is open) to pick a color from your job. If you click and drag, the Color Picker will show the currently selected color the same way as the Densities tool. See [Densities](#) on page 60. As soon as you release, the selected color will be set in the Inspector.
- Click the **All Zero** button  to make the object(s) or stroke(s) completely white and knock-out for all separations
- Click the **Registration Color** button  to switch to registration color. The dialog will only show one line, and the entered percentage will be used for all separations. The Registration Color button has changed to this: . Click this button to switch back to normal color.

- Click the button on the right of the separation name to switch the selected object(s) or stroke(s) to overprinting for that specific separation. The separation percentage field will become empty, and the state will change to overprinting . Clicking the button again will switch back to knock-out and 0% You can also enter **t** as value to set the separation overprinting. Enter **at** to set all separations overprinting.
- If all separations that are unused (i.e. set to 0%) are set to knock-out, you can click the **Set unused separations overprinting** button above the separations to change the state of all unused separations to an "overprinting" state. If at least one separation is overprinting, you can click the **Set overprinting separations knockout** button to switch all overprinting separations to knock-out (0%).

Gradient

Gradients are defined by a series of stops along the gradient slider. A stop marks the point at which a gradient changes from one color to the next, and is identified by a square below the gradient slider. The squares display the color currently assigned to each gradient stop. With a radial gradient, the leftmost gradient stop defines the center point's color fill, which radiates outward to the color of the rightmost gradient stop.





- Select the type of gradient: **Radial** or **Linear**
- Use the **Angle** field to numerically change the rotation.
- Set up the **Color stops**:
 - a) Click a Color Stop to select it and set its color . See [Setting the color of a gradient Color Stop](#) on page 114
 - b) Click on the bottom of the bar to add a Color Stop.

- c) Click and drag a Color Stop to change its position in between the other Color Stops. This is not possible for the start and end Color Stop.
- d) Select a Color Stop and drag while holding the ALT key to duplicate the Color Stop
- e) Select a Color Stop and click the trash icon or drag it downwards to delete it. You can't delete the start and end Color Stop.
- Set up the **Midpoints**
 - a) Click and drag a Midpoint of the gradient to move it manually.
 - b) Click a Midpoint to select it, and enter its **Position** as a percentage. Values between 13% and 87% are allowed.
 - c) Alt-click a Midpoint to reset it to 50%

Setting the color of a gradient Color Stop

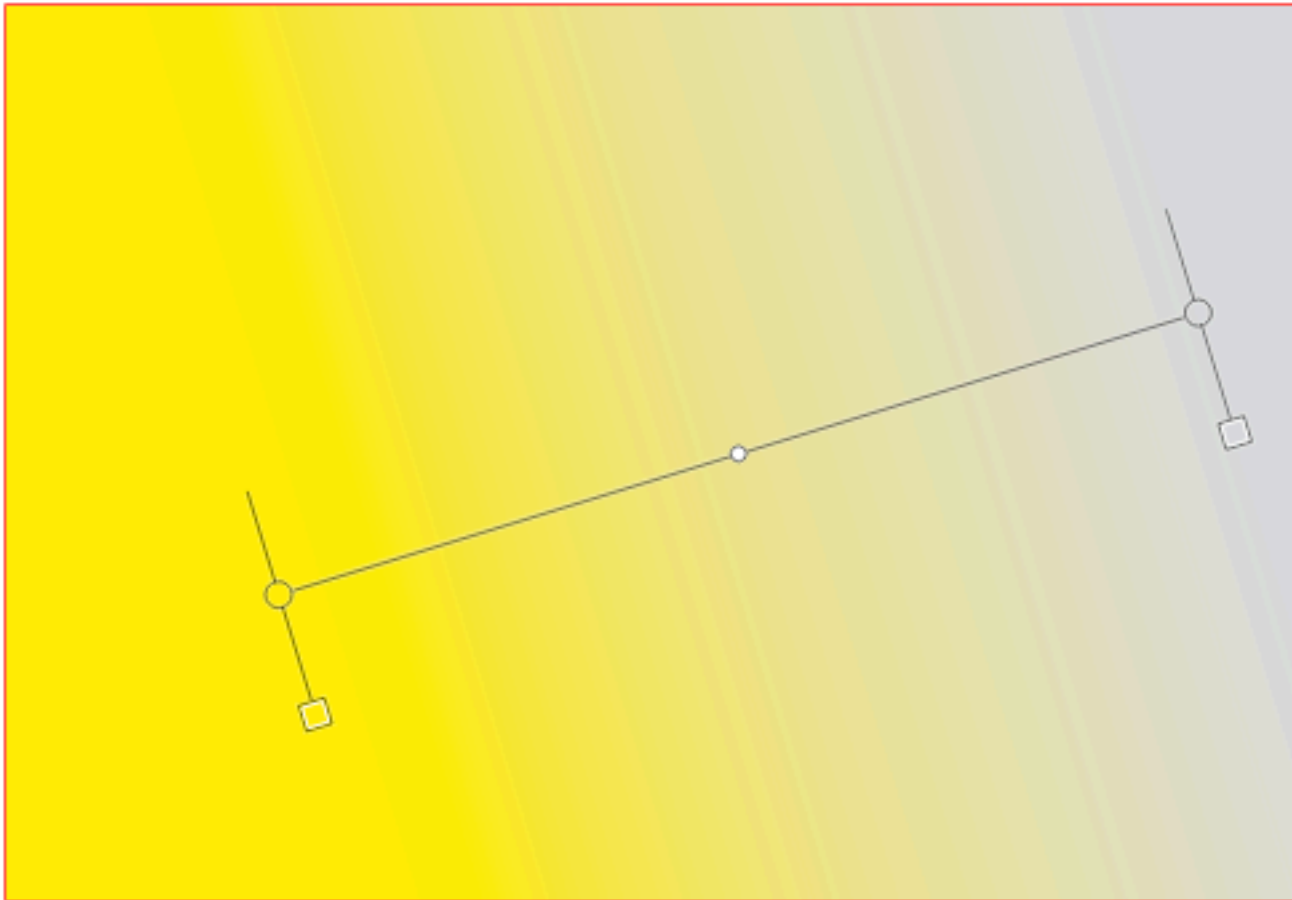
Setting the color of one of the Color Stops of a gradient is the same as setting a flat color. See [Flat Color](#) on page 112

There are however a few restrictions:

- Clicking the **Registration Color** button  will change both the begin and end color to registration color (or back to normal color when clicking again)
- A gradient can not go from transparent to knock-out (0% or a specific value). If you set one point to transparent for a separation that is knock-out in the other point, this will automatically change back to knock-out.
- Because of the limitation mentioned above, clicking the **Set unused separations overprinting** button  will only change the separations that are unused (0%) in both the begin and end point. Both occurrences will change to Transparent.

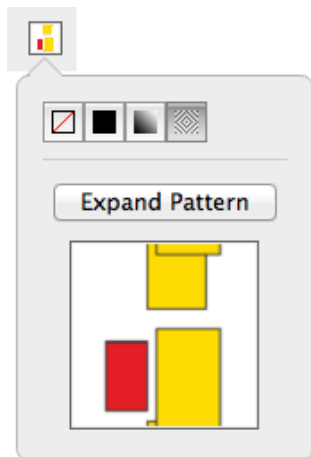
Manually editing the handle points of a gradient

If you select an object with a gradient, you have one of the selector tools (Object Select tool, Group Select tool or Transform tool) and the Inspector is open, you can edit the gradient using the handle points in the object itself.



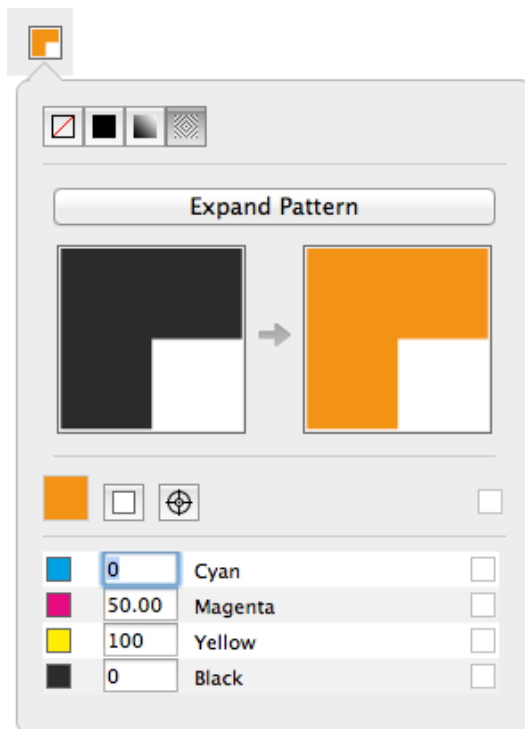
- Click and drag one of the end points of a linear gradient to move the position of the end point.
- Click and drag the center point of a radial gradient to position the center point within the gradient.
- Click and drag the circumference of a radial gradient to change its size.
- Click and drag the handles line to move the gradient while maintaining the angle and distance between end points
- Click and drag a Midpoint to change its position. Alt-Click it to re-center it in between the two Color Stops.
- Double-click a Color Stop or Midpoint to select it. You can then change its properties (color for a Color Stop, Position for a Midpoint)

Pattern



If you have a pattern filled object selected, you can open the **Pattern Inspector**

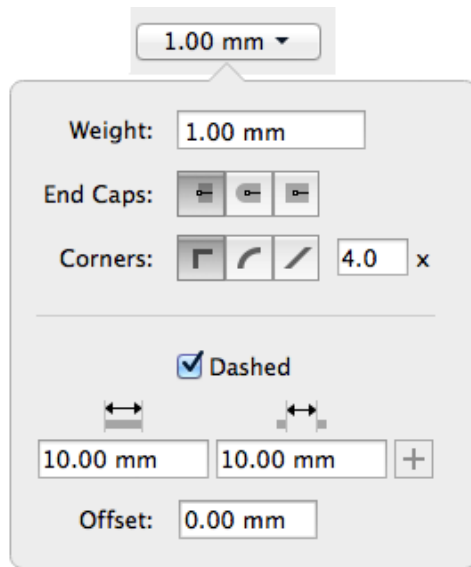
- You can click the **Expand Pattern** button to replace the fill with a repetition of the actual objects.
- If the pattern is colored, you get a preview of the pattern, but can't change it.
- If the pattern is uncolored, the pattern inspector will show 2 thumbnails, and you can set the color for the pattern yourself.



8.5.2. Stroke Inspector

Using the Stroke Inspector, you can change the size and shape of a stroke

1. Open the **Stroke Inspector**



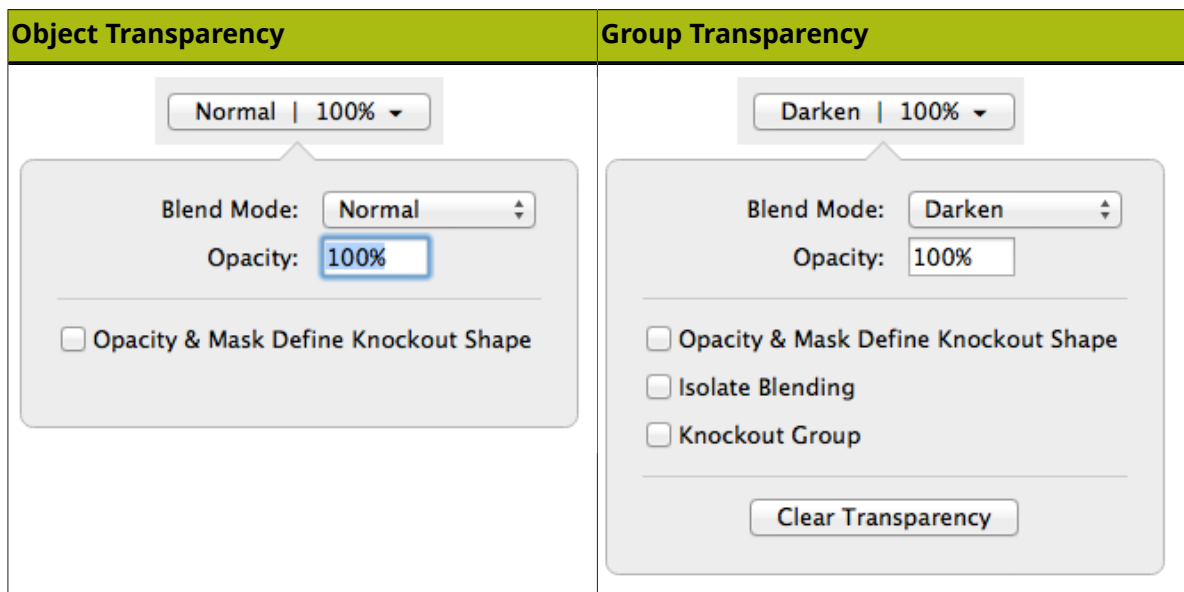
2. Define the **Weight** of the stroke. Enter a number to use the default unit, or add the unit and it will be converted to the default unit. See [Preferences](#) on page 34. You can enter zero or leave the field blank to switch to "no stroke".
3. Select the shape of the **End Caps**:
 - With **Butt Caps** the stroke is squared off at the end point of the path.
 - With **Round Caps**, a semicircular arc with diameter equal to the line width is drawn around the end points of the line, thus prolonging it.
 - With **Projecting Caps** the stroke continues beyond the end point of the path and is squared off at a distance equal to half the line width.
4. Select how the sharp corners should be handled:
 - **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 Distance, then the corner will be cut off (beveled). If it is less than 4 times the Distance, the corner will be left as it is.
 - **Round**: a round cap will be placed at all corners.
 - **Beveled**: this will cut sharp corners off.
5. Enable **Dashed** to create a dashed stroke
 - Define the size of the dash and the size of the gap
 - If you want to add another combination of dash and gap, click the + button. To remove a combination, click the - button

- Enter an **Offset** distance to modify the starting point for the dashes & gaps.

8.5.3. Transparency Inspector

The **Transparency Inspector** shows the transparency settings of the currently selected object or group. Keep in mind that although group and object transparency can be combined, the inspector will show either the group or the object transparency, depending on the selection.

Note: You can use the **Breadcrumbs** to see or change the current selection.



Blend Mode

A Blend Mode makes a combination between the blend object (object on which the blend mode is applied) and a base object (underneath the blend object), resulting in a blend color. The final result will depend on the base object, the blend color and the opacity (see below)

Note: Non-white preserving blend modes (Difference, Exclusion, Hue, Saturation, Color and Luminosity) require all 4 process separations. If these separations are not present, using a Non-white preserving blend mode will add them.

Opacity

The Opacity defines how much of the Blend result will be used. If the Opacity is 100%, the result will be 100% of the Blend result (as described above). If the Opacity is e.g. 60%, the final result will be 60% of the Blend result (not the color of the object to be blended, but the resulting Blend color) and 40% of the original Base color.

Opacity & Mask Define Knockout Shape

The Opacity & Mask define knockout shape option only affects the combination of objects with an Opacity mask, inside a group with the Knockout Group option. The result will be that, instead of knocking out completely, the object with the Opacity Mask will be knocked out based on the Opacity Mask and the Opacity value.

Isolate Blending

When an object inside a group has a blend assigned to it, this will affect all objects underneath. If the **Isolate Blends** option is on, blends assigned to objects inside a group, are only calculated to objects within the same group and not to objects outside the group. The opacity however will also affect the objects underneath.

Knockout Group

With the **Knockout groups** option on, objects inside the group will only interact with what's behind the group - not with other elements inside the same group. This means that all blending and opacity calculation is done between the object (which is inside the group) and the group's background (which is outside the group).

Note: A group without transparency (shown as "Group" in the breadcrumbs, and not as "Transparency Group") will inherit the Knockout Group setting from the Transparency Group it is part of.

Clear Transparency

Clicking the **Clear Transparency** button will set the Blend Mode to Normal, set the Opacity to 100% and deselect all options. The Transparency Group will become a normal Group again, so the Knockout Group option will again be inherited (see above).

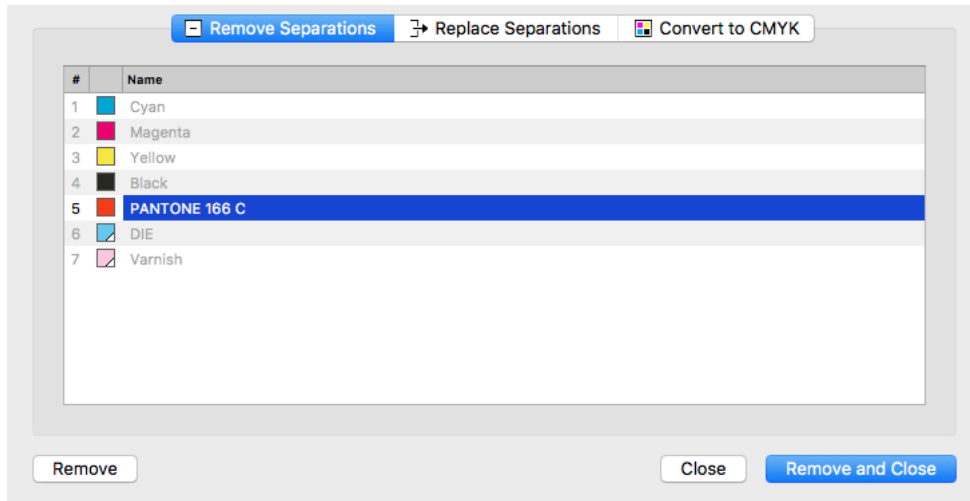
Opacity Mask

If an Opacity Mask is selected, the Transparency Inspector will contain the **Edit Opacity Mask** button, **Release Opacity Mask** button, a preview of the mask, the **Clip** option and **Invert mask** option will . See [Opacity Masks](#) on page 100

8.5.4. Recolor

Using **Recolor** you can remove Separations, replace Separations or Convert Separations to CMYK for the selected objects. Objects outside the selection are not modified.

1. Select the objects you want to modify
2. Select **Object > Recolor...**
3. If you want to remove a separation:
 - a) Select the **Remove Separations** tab.

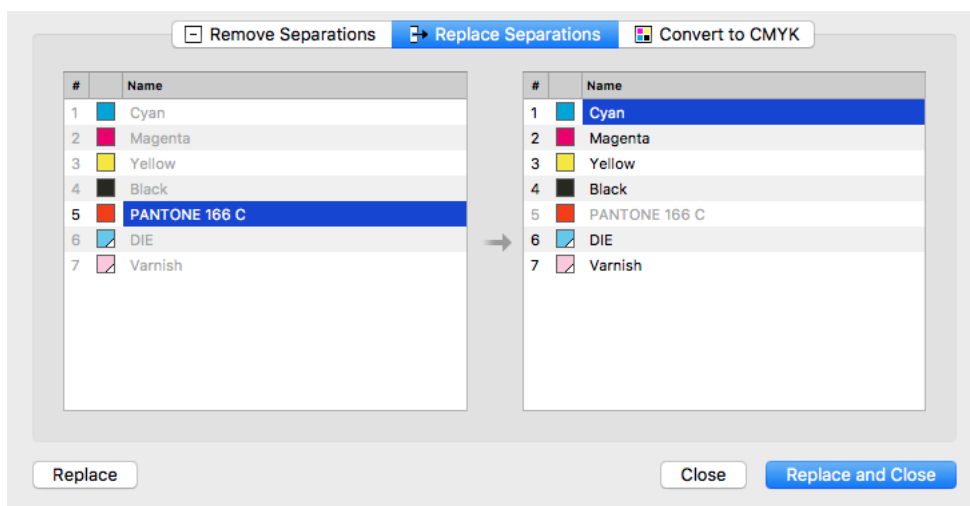


- b) Select the separation(s) you want to remove from the selection. Only separations used in the selection are available.
- c) Click **Remove** to remove the separation(s) from the selected objects and keep the dialog open for another Recolor operation, or click **Remove and Close** to apply the operation and close the dialog.

The selected separation(s) will no longer be used in the selected objects. If a separation is no longer used in the document, it will also be removed from the Separations list.

4. If you want to replace a separation:

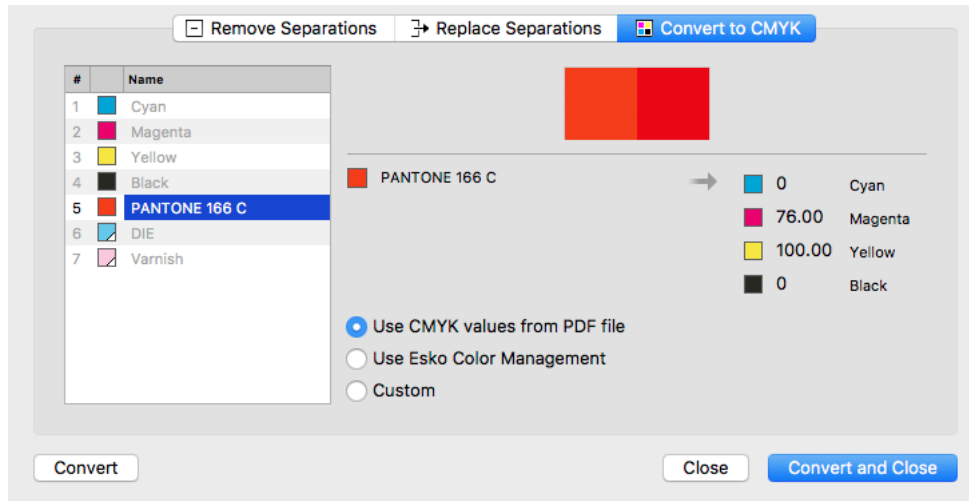
- a) Select the **Replace Separations** tab.



- b) In the left column, select the **source** separation(s) you want to replace in the selection. Only separations used in the selection are available.
- c) In the right column, select the **target** separation. You can select any separation from the document, except for the source separations.
- d) Click **Replace** to replace the separation(s) in the selected objects and keep the dialog open for another Recolor operation, or click **Replace and Close** to apply the operation and close the dialog.

The selected separation(s) will be merged with the target separation. If a separation is no longer used in the document, it will also be removed from the Separations list

5. If you want to convert a separation to CMYK:
 - a) Select the **Convert to CMYK** tab.



- b) Select the separation you want to convert to CMYK in the selection. Only spot color separations used in the selection are available.
- c) Select the CMYK values you want to use:
 - the CMYK values that are saved in the PDF file
 - the CMYK values using the Esko Color Management (not available for custom inks)
 - Custom values you can enter yourself.
- d) Click **Convert** to convert the separation in the selected objects and keep the dialog open for another Recolor operation, or click **Convert and Close** to apply the operation and close the dialog.

The selected separation will be converted to CMYK in the selected objects. If a separation is no longer used in the document, it will also be removed from the Separations list

Note: The **Recolor** function only changes separations within the selected objects. To remove separations, replace separations or convert separations to CMYK for the complete document, you can use the **Separations** section. See [Separations](#) on page 74

8.6. Creating objects

8.6.1. Create Rectangle / Create Ellipse

Using the **Create Rectangle** or **Create Ellipse** tool you can create rectangles, squares, ellipses and circles.

1. Select the **Create Rectangle** or **Create Ellipse** tool

- By selecting the tool from the **Tool Switcher**. See [Changing tools](#) on page 28
- By using the shortcut **S**.

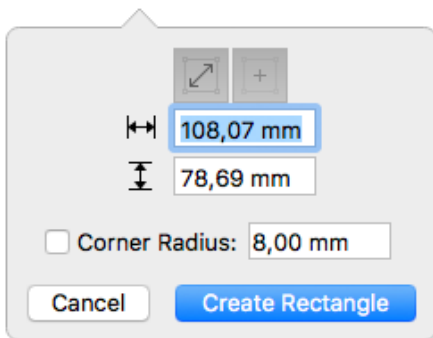
Note: If another tool is active, the shortcut **S** will select the Create Rectangle tool. If the Create Rectangle or Create Ellipse tool is active, using the shortcut will switch between Create Rectangle and Create Ellipse.



2. Click and drag to create a rectangle or ellipse **manually**

- By default, a rectangle or ellipse is created from the corner point. In other words, the point you start dragging will be one of the corners of the rectangle or bounding box of the ellipse. Hold the ALT key to create the shape from the center point
- Hold the Shift key to create a constrained shape, i.e. a square or a circle.
- Hold both the ALT and the Shift key to create a constrained shape from the center point.

3. Click to create a rectangle or ellipse **numerically**

The **Create Rectangle** or **Create Ellipse** dialog will appear



- When one or more objects were selected when you clicked, the **Select Same Size** button  and **Select Same Center** button  will be enabled. This means the newly created rectangle or ellipse will have the same size and position as the bounding box of the selection. If there were no objects selected when clicking, the options will be disabled by default.
- You can enter the horizontal size and vertical size. The arrow on top of the dialog, positioned at the point you clicked, indicates the starting point of the rectangle or ellipse. You can use negative values to create the shape in the opposite direction. Changing the dimensions will automatically disable the **Select Same Size** and **Select Same Center** buttons.
- If you enable **Select Same Center**, the new shape will use the entered dimensions, centered on the center of the selection.
- For rectangles, you can enter a **Corner Radius**. This will result in rounded corners.
- Click **Create Rectangle** or **Create Ellipse** to create the new shape. If you want to close the dialog without creating a new shape, click **Cancel**, use the **Esc** key or simply click outside of the dialog in your document.

The shape you create will follow the angle of the Crosshair. See [The Crosshair](#) on page 52

The created object will take the fill and stroke of the active selection at the time of creation. If nothing is selected, the new shape will have a 100% fill of the darkest color, and no stroke.

The new object will be screened using the default screen set, when available.

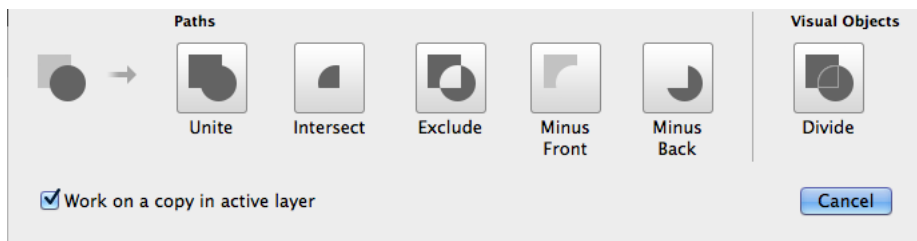
The corner radius of a rectangle with rounded corners can't be changed after creation.

Note: Enabling the **Select Same Size** button will always enable **Select Same Center** as well.

8.6.2. Shaper

Using the Shaper tool you can make combinations of existing objects

1. Select one or more objects
2. Choose **Object > Shaper**, click the **Shaper** button or use its shortcut **Cmd+E** (Mac) or **Ctrl+E** (Windows) to open the Shaper window.



3. If you want to create new objects based on the Shaper operation, select **Work on a copy in active layer**. If you want to modify the selected objects, leave the option disabled.
4. Click the button or apply the shortcut of the operation you want to perform:
 - **Unite** combines your selected objects into a single shape. Shortcut **1**.
 - **Intersect** keeps the areas where objects are stacked on top of each other. Shortcut **2**.
 - **Exclude** keeps the areas where an odd number of objects are stacked on top of each other. Shortcut **3**.
 - **Minus Front** keeps the areas of the bottom shape which are not overlapping with the overlying shapes. Shortcut **4**.
 - **Minus Back** keeps the areas of the top shape which are not overlapping with the underlying shapes. Shortcut **5**.
 - **Divide** creates a group of individual areas filled with 100% of the darkest document separation. This can be used to prepare your White Underprint shapes. Shortcut **6**. This function does not include open paths or objects without fill and stroke paint.

8.7. Working with Text

ArtPro+ contains basic text editing functionality.

You can select a text box or text inside a text box and edit its properties in the **Text Inspector**, as well as creating and editing text boxes.

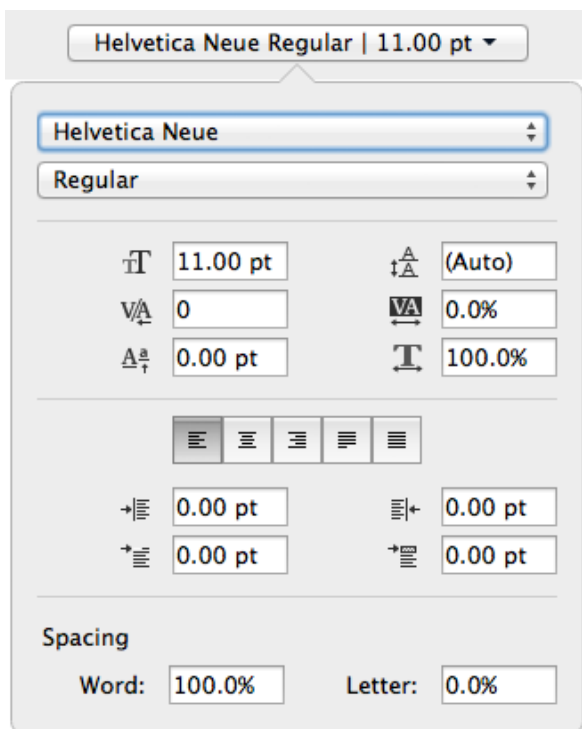
- You can use the Text Inspector to change text properties such as font family, size, etc. See [Text Inspector](#) on page 124

- You can use the Text Box Transformation Inspector to set the position and orientation of the Text Box. See [Text Box Transformation Inspector](#) on page 125
- You can use the Text Tool to create, edit and select text and text boxes. See [Using the Text Tool](#) on page 125
- You can replace text by its outlines using [Contourize Text](#) on page 128
- You can fix reflow issues using [Split Erratic Text Boxes](#) on page 111

8.7.1. Text Inspector

Using the Text Inspector, you can check and change the parameters for the currently selected text.

1. Select the text you want to check or change
 - Select text boxes using the regular selection tools
 - Use the **Text Tool** and select a portion of the text.
2. Open the **Text Inspector**



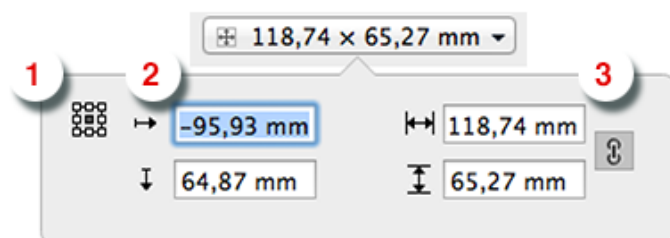
3. Select the **Font Family** and **Font Style**.
The Font Family dropdown will show all fonts used in the current document on top, and all available system fonts underneath.
4. Define the Font Size, Leading, Kerning, Tracking and Level.
For Font Size, Leading and Level, you can enter a number to use the default Font unit, or add the unit and it will be converted to the default unit. See [Preferences](#) on page 34
5. Set the Horizontal Scaling. A negative value will flip the text.

If you scale text using the transform tools, the Font Size and Horizontal Scaling values will be adjusted accordingly.

6. Using one of the buttons, you can set the **Alignment**: Left, Central, Right, Justify only full lines or Justify all lines.
7. Set the **Indentations**: Left, Right, First Line Indent and First Line Gap (distance above the paragraph).
8. Define the Word and Letter **Spacing**

8.7.2. Text Box Transformation Inspector

The Transformation Inspector shows information on the size and position of the selected text box. You can also use it to do basic transformations on the text box. For more elaborate transformations, you can use the numeric transform function. See [Numeric Transform](#) on page 95.



1. The **reference point** on the bounding box of the text box used to determine the position (see below) and when changing the size while the crosshair is hidden.
2. The **position**, horizontal and vertical, of the center of the crosshair to the selected reference point. If the crosshair is not visible, the top left corner of the mediabox is used instead. You can move the text box by entering a different distance.
3. The **size** of the text box. You can change the size by entering a different size. If the two values are linked, changing one value will also change the other. The center of the crosshair is used as point of origin. If the crosshair is hidden, the reference point is used instead.

8.7.3. Using the Text Tool

Using the **Text Tool** you can create or edit a text box, and edit text in a text box.

1. Select the **Text Tool** from the Tool Selector or by its shortcut **T**.

Note: If the Text Tool is active, all text boxes are highlighted, so you can see where live text is located.

2. Click and drag to create a new text box, or click inside a text box to start editing it.

Note: If you create a new text box, it will use the system default font (Helvetica on Mac, Arial on Windows) in 100% of the darkest ink in the document. However, if you have a text box selected when creating a new text box, the properties and fill of that text box will be used in the new text box.

3. Edit the text inside the text box (see [Editing text](#) on page 126) or click and drag one of the handles of the text box to change the text box.
4. Select another tool or use the **esc** key to exit the text editing mode.

Note: If there are any problems displaying, editing, embedding or saving the font information, a warning will be shown.

Editing text

When you are in text edit mode, you can change the content of the active text box

1. You can select text by click and dragging, or by one of the specific text selection functions. See [Selecting text inside a text box](#) on page 126
2. You can select text and remove it using the backspace or delete key
3. You can type to add text.
4. You can Cut, Copy and Paste text, even across multiple documents and multiple editors
5. You can use the **Text Inspector** to change the properties of the selected text. See [Text Inspector](#) on page 124

Selecting text inside a text box

While in text edit mode, there are different ways to select parts of the text box.

- Click and drag to select a specific portion
- Drag while holding the ALT key to select full words when dragging horizontally, or full paragraphs when dragging vertically
- Use Shift + Left or Right arrow to select a single character
- Use Shift + ALT + Left or Right arrow to select a full word at a time
- Use Shift + ALT + Up or Down arrow to select a full paragraph at a time.
- Use Cmd + A (Mac) or Ctrl + A (Windows) to select all text in the text box.
- Use Cmd + Shift + A (Mac) or Ctrl + Shift + A (Windows) to deselect all text in the text box.
- Double-click to select a full word, triple-click to select the full paragraph, or quadruple-click to select all text in the text box.

Merging text boxes

You can merge different text boxes into one single text box.

1. Use one of the selection tools to select the text boxes you want to merge
2. Choose **Object > Text Box > Merge**

When possible (i.e. the text boxes are close enough, yet not overlapping), the selected text boxes will be replaced by one single text box. If no merging is possible, a warning will be shown.

When trying to merge more than 2 text boxes, all text boxes that can be merged (see above) will be, and other text boxes remain unchanged.

Splitting a text box

You can use the **Split** function to split a text box

1. Use the Text tool to activate the text box you want to split.
2. Place the cursor in the text where you want to split the text box, or select the text you want to put in a separate text box
3. Choose **Object > Text Box > Split**

The text box will then be split in two or (if you selected text in the middle of the text box) three separate text boxes, each keeping the text properties and visual appearance of the original.

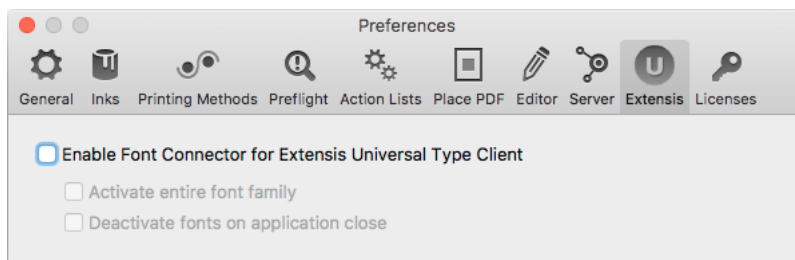
Note: In some cases, ArtPro+ can suggest automatic splitting of erratic text boxes. See [Split Erratic Text Boxes](#) on page 111

8.7.4. Extensis Universal Type Client

If you are using Extensis Universal Type Server and Client, and you have acquired an ArtPro+ Font Connector license from Extensis, you can now use this with ArtPro+.

If you open a file with an embedded subset of fonts not in your system but present on the Universal Type Server, the Extensis Universal Type Client will activate these fonts so they can be used as a system font in ArtPro+.

1. Open the **Preferences** and choose the **Extensis** tab. See [Preferences](#) on page 34



2. Select **Enable Font Connector for Extensis Universal Type Client**.

If you don't have the Universal Type Client installed, if you don't have a valid license, if its version is lower than 6.1.7, or if you are not logged on, you will get a warning and the connection will not work.

3. If you enable **Activate entire font family**, not only the font variety used in the file you open will be activated, but all fonts of the font family.

4. If the **Deactivate fonts on application close** option is enabled, fonts that were activated by ArtPro+ will be deactivated when you close the application. Otherwise, these fonts remain activated.

8.7.5. Contourize Text

Using this function, you can replace editable text by a group of paths and compound paths, without causing any visual difference.

1. Select the text you want to edit
2. Select **Object > Text > Contourize Text**

Contourize Text can also be applied from the **Object > Path** and **Object > Clean** menu, and from the **Clean** dialog. See [Clean](#) on page 109

Note: Contourize Text doesn't work on Dynamic Marks or Protected Objects.

8.7.6. Convert Outlines to Text

Convert Outlines to Text is a function to convert vectorized (contourized) text back into live editable text. This can be used e.g. to do last-minute text corrections on packaging artwork.

1. Select the outlined text that you want to convert

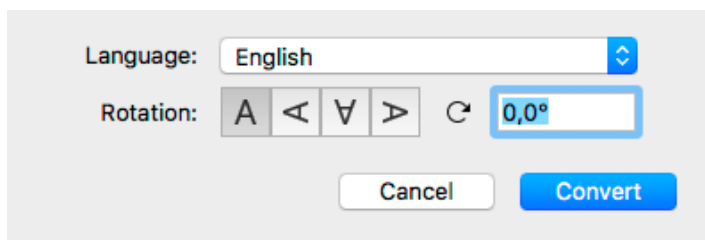
Note:

All outlines in the selection will be converted into one single text box. For this reason, it is advised to make the selection not too big: text items not too far apart, not too many different indentations etc.

On the other hand, since the font recognition is only based on the outlines in the selection, it is advised to not make the selection too small either.

2. Choose **Object > Text > Convert Outlines to Text** or use its shortcut **Cmd+Alt+Shift+T** (Mac) or **Ctrl+Alt+Shift+T** (Windows)

Convert Outlines to Text can also be applied from the **Object > Path** menu.



- a) Set the **Language**

You can use a Language from the "Available" list immediately. If you select a language from the "Ready To Download" list, the language will be downloaded and installed first.

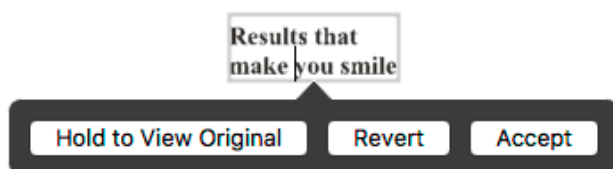
The Language will then move to the "Available" list. You need an internet connection to do this.

Selecting the language will help the text recognition, especially when language specific accented letters are used. So if the outlined text contains a mix of different languages, it is advised to select the language with the most accented letters.

- b) Set the **Rotation** of the outlines you want to convert, either by entering a value in the input field, or by selecting one of the four buttons. The more accurate the angle is, the more accurate the conversion will be.
- c) Click **Convert**

ArtPro+ will compare the outlines to your locally installed fonts, and will use the top matching font.

3. Once the conversion is done, the object will be shown as a Converted Text Box, and you have different options.



- a) Click and hold **Hold to View Original** to hide the converted text and see the original outlined text. You can toggle between the outlines and the converted text as long as you don't Accept or Revert.

You can also use the **Quality Control Compare** function: as long as the converted text hasn't been accepted or rejected, you will see a **Original Text Outline** option. See [Compare](#) on page 58.

- b) If the font doesn't seem like a good enough match to you, you can select a different font in the **Text Inspector**. The font list will show the best matching fonts on top of the list.
- c) If necessary, you can do small corrections to the converted text, e.g. replace a character. It is recommended to resolve this type of issues before accepting the conversion.
- d) When you're happy with the result, you can click the **Accept** button. This will remove the original outline from the document, leaving you with a regular text object that you can edit as needed. You can also use the **Accept Converted Text** in the Text inspector
- e) If you want to revert the converted text box to the original outlined text, you can click **Revert**. You can also use the **Revert Converted Text to Original Outlines** button in the Text inspector.

Important:

It is highly recommended to Accept (or Revert) the text conversion before closing the file. Not only to ensure smooth processing of the file further down the workflow, also in order not to lose its editing capabilities. When attempting to alter text in a Converted Text Box after saving, closing and reopening of the document, you will be prompted to restart the conversion.

This means that your outlined text will be converted again according to the same rotation angle as before, but you will need to reconfirm the language and any font or text changes you made before will be lost.

To indicate that there are unaccepted Converted Text Boxes in your document, a "Converted Text Box" message will be shown in the Messages drawer. This will only disappear once all Converted Text Boxes have been either accepted or reverted.

8.8. Working with images

8.8.1. Place

You can place an image in your current document

- By selecting **File > Place**.
- By its shortcut **Cmd+Shift+P** (Mac) or **Ctrl+Shift+P** (Windows).

Note: Using the same **Place** function, you can place Images, PDF files and Structural Design Files. See [Place](#) on page 137 and [Place Structural Design](#) on page 144

You can place images as linked images by enabling the **Link Images** option in the Place dialog. If the option is disabled, the image will be embedded. See [Linked and Embedded images](#) on page 131

ArtPro+ can place TIFF files, PSD files, and Barco .ct files.

- CMYK and DeviceN images are fully supported.
- RGB and LAB images have some limitations: Channel mapping is not possible, and linked RGB or LAB images in a Normalized PDF will be saved as embedded, high resolution CMYK images. You will be informed if this conversion takes place.
- If you place an image that contains inks not in the current document, these ink(s) will be added to your document. When doing so in a Normalized PDF, saving the file will warn you that the default screening will be applied to unscreened objects.

You can also place Barco .LP files. These always use the Black separation.

Important: When saving a PSD file in Adobe Photoshop, make sure to enable the "Maximize compatibility" option. Files saved without this option might not open correctly. The option can be found when saving, or in **Preferences > File Handling > File Compatibility > Maximize PSD and PSB File Compatibility**

8.8.2. Place Image Inside

To place an image inside the selected path or paths, you can choose **File > Place Image Inside...** or use its shortcut **Cmd-Alt-Shift-P** (Mac) or **Ctrl+Alt+Shift+P** (Windows).

The file is placed, and the selected path is used as clip path for the placed image. If your selection contains multiple paths, a compound of the selected paths is used.

The placed image is placed at 100% scaling and is positioned at the center of the bounding box of the selection. For more information about placing, see [Place](#) on page 130

You can use **Place Image Inside** if your selection contains

- 1 or multiple Paths (including contourized text),
- 1 or multiple Compound Paths,
- a mix of both
- 1 single Clipping Path.

For other selections, the Place Images Inside function will not be available.

8.8.3. Linked and Embedded images

Images can be linked (i.e. the reference to the external file is saved in the file), embedded (the actual image information is saved in the file) or both.

When saving Normalized PDF, embedded images are saved as embedded images, and linked images are saved as linked images.

When saving a PDF+ (see [PDF, PDF+ and Normalized PDF](#) on page 43) file containing linked images, a full resolution embedded version of the image will also be saved in the file, so when opening a PDF+ file that contains linked images that can't be found, you can choose to browse for them, continue to open the file while ignoring the broken link for now, or unlink the images and keep using the embedded version.

- When placing an image, you can enable **Link Images** to place the image linked, or you can deselect it to embed the image. See [Place](#) on page 130
- You can extract an embedded image and make it linked using the **Extract and Link** function. See [Extract and Link](#) on page 132
- You can unlink a linked image using the **Unlink** function. For Normalized PDF files, this means removing the link and embedding the image. In case of PDF+, the image is already embedded, so this will only remove the link. See [Unlink / Embed and Unlink](#) on page 132

When opening a file, and when navigating to a different page in a PDF+ file, ArtPro+ will check for missing and/or out of date files. See [Missing and out-of-date files](#) on page 41

Extract and Link

Using **Extract and Link** you can extract the embedded image and replace it by a linked image. to the location where you want to save the linked image. By default, ArtPro+ will suggest to save the file as a TIFF, however PSD can be available as option too, depending on the contents of the image.

1. Select the embedded image you want to extract
2. Select **Object > Image > Extract and Link** or click the **Extract and Link** button in the Image Inspector
3. Set the location and file name to save the image to disk. By default, the job name is used as file name.

The image is saved to disk, and this image is then used as linked image.

Unlink / Embed and Unlink

Unlink (for PDF+) and **Embed and Unlink** (for Normalized PDF) will remove the link to the image file on disk and only keep an embedded version of the image in the document

1. Select the linked image you want to embed
2. Select **Object > Image > Unlink** or **Embed and Unlink**, or click the **(Embed and) Unlink** button in the Image Inspector

Update images

Update will check if the image on disk has been changed, and if so, update the preview in the document.

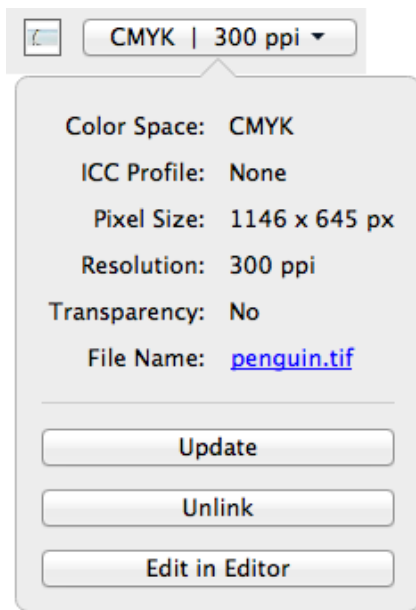
You can either choose **Object > Image > Update**, click the **Update** button in the Image Inspector, or select **Update** in the fly-out menu of the Images Side Drawer.

If the image cannot be found at the moment the image is selected in the document, the **Update** button in the Image Inspector will be replaced by a **Browse** button, allowing to relocate the missing image.

If the updated image contains less or more channels than the original, you will be informed about it. If there are now less channels than in the original, the obsolete channels are removed from the image channels list in the Channel Mapping inspector. If the updated image has extra image channels, they will appear in the image channels list in the Channel Mapping inspector, but won't be used in the channel mapping automatically.

8.8.4. Image Inspector

If the selection contains an image, the **Image Inspector** will be available.



The Image Inspector will show all properties of the selected image:

- the **Color Space**: Bitmap, Grayscale, CMYK, Multichannel, RGB or Lab
- the **ICC Profile** used in the image
- the Pixel Size
- the Resolution in ppi. If multiple images are selected, the minimum and maximum resolution are shown.
- Transparency: does the image contain a transparency (Alpha) channel, yes or no.
- The **Edit in Editor** button. See [Opening images in an external editor](#) on page 135

Note: The resolution used is the output resolution, after the scaling of the image

For Linked images, you will also see:

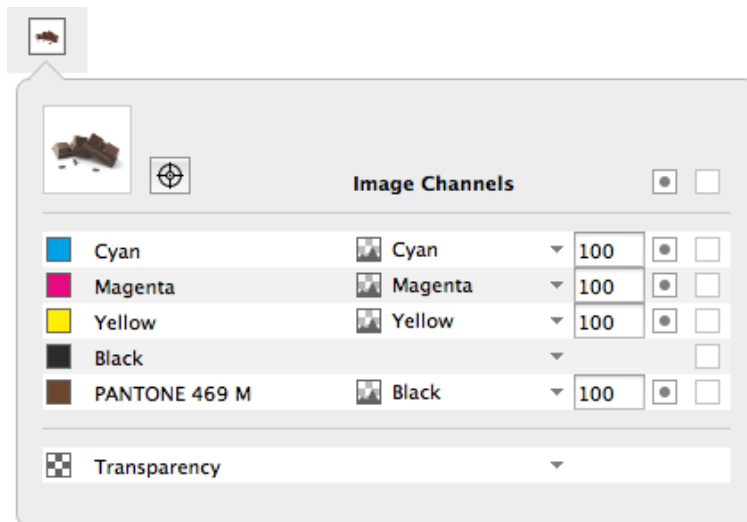
- File Name: the name of the linked image. If the name is underlined and blue, the name works as a link to open the file location in Finder (Mac) or Windows Explorer (Windows). If the name is underlined but gray, it means the link can (temporarily) not be found.
- The **Update** or **Browse** button. See [Update images](#) on page 132
- **(Embed and) Unlink**. See [Unlink / Embed and Unlink](#) on page 132




For embedded images, you will also see:

- **Extract and Link**. See [Extract and Link](#) on page 132

8.8.5. The Channel Mapping Inspector

If the selection contains one image (or multiple copies of the same image), the **Channel Mapping Inspector** will be available. This can be used to remap an image channel to another ink, invert a channel or change its Density. Mapping a channel onto a (different) separation means the data of that channel will be used for output on the specified separation. In the example underneath, the data of the Black channel of the image will be output in the brown Pantone separation



- For every separation, you can define what channel of the image you want to use. You can also define the channel you want to use as **Transparency** channel. See [Using a Transparency channel](#).
 - a) Click in the **Image Channel** column and select the channel you want to use from the dropdown. All channels found in the image will be available in the dropdown.
 - b) Enter a percentage between 0% and 100% in the **Density** field to set the maximum Density for the channel.
 - Enter **a** followed by a value, to set all separations to that value.
 - enter **x** to set the value to 100%, or enter **ax** to set all values to 100%
 - Click the color patch to set the value for that separation to 100%. Clicking it again will switch it between 0% and 100%.
 - c) Click the **Invert** button to invert the channel
- Click the **Registration Color** button  to switch to registration color. The dialog will only show one line, and the selected channel and density percentage will be used for all separations. The Registration Color button has changed to this: . Click this button to switch back to normal color.
- For separations that don't have a channel assigned, you can click the overprinting button on top of the column, or next to any of the unmapped separations, to switch all unmapped separations to overprinting . Clicking one of the buttons again will switch them all back to knock-out.

For embedded images, the origin of the channels can't be kept, so when you save, close and reopen a file with embedded images, the channel names will match the separation names again - even if these channels were originally taken from another separation. E.g. if you map the Cyan channel onto the Magenta separation, the name of the channel will remain Cyan while you are still working on the file. Once you've saved, closed and reopened it, the channel




for the Magenta separation will be called Magenta (but contain the data from the original Cyan channel).

For images that are linked (both in Normalized PDF and PDF+), ArtPro+ remembers the origin of the channels, so even after saving, closing and reopening, you will still see the original name of the channel. So in the given example, the channel for the Magenta separation will still be called Cyan after a save, close and reopen. This will allow to apply the same channel mapping when replacing the image. See [Replacing an image](#) on page 136

Channel mapping is not possible for RGB or LAB images.

Using a Transparency Channel

In the Channel Mapping Inspector, you can set any image channel as Transparency channel.

1. Use the **Density** percentage field to reduce the opacity.
2. Click the **Invert** button  to invert the channel. Inverting is done before applying the density.
3. By default, the transparency channel is only applied on the base color space, so typically on the CMYK channels, and not on the spot color channels. You can however change this by opening the channel selection dropdown and choosing **(Do not) Apply transparency on this channel**. The icon in front of the channel will change indicating the transparency is applied  or not 
 - This option is only available if a Transparency channel is set.
 - This setting applies to wherever the channel is used. A channel mapped on multiple separations can only have one setting
 - If you change the setting so it doesn't conform to the Photoshop model (i.e. transparency applied on a spot color, or transparency not applied on a process separation), **Edit in Editor** will not be available.

8.8.6. Opening images in an external editor

Images placed in ArtPro+ can be easily edited in an external editor, and the changes can immediately be applied in ArtPro+.

1. If necessary, define the **External Editors for Images** in the **Preferences**. See [Preferences](#) on page 34. If it is already defined or if you want to use the default image editor, you can skip this step.
2. Select the image you want to open in the external editor, and do any of the following:
 - Alt-double-click the image
 - Alt-double-click the "Image" breadcrumb.
 - Select **Object > Image > Edit in Editor**
 - In the Image Inspector, click **Edit in Editor**

For an embedded image, a temporary copy of the image will be opened in your external image editor. For a linked image or if both are available (PDF+), the external file is opened.

3. Apply the desired changes to the image, and save it.
4. Switch back to ArtPro+. A message will inform you that an image was edited, and you can see all changes are applied on the image.

Note:

If the number of channel is changed and saved, the behavior will be the same as when updating an image. See [Update images](#) on page 132

8.8.7. Replacing an image

You can simply replace an image without having to place (and scale, position,...) the image again.

1. Select the image you want to replace, or multiple instances thereof.
2. Select **Object > Image > Replace...** and navigate to the correct image. You can only select supported image file types. See [Place](#) on page 130
3. If you want the new picture to be linked, enable the **Link** option. If you want the new picture to be embedded, disable it. By default, the option will be enabled if the image you are replacing is linked, and it will be disabled if it is embedded.
4. Click **Open**.

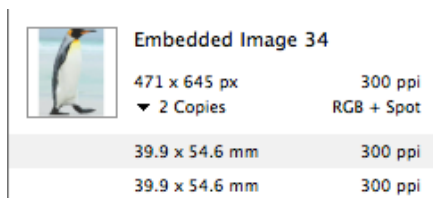
The selected (copies of the) image will be replaced. Position and dimension of the replaced image are kept. If the new image has different proportions than the replaced image, it is scaled non-proportionally to fit the dimensions.

If the image you replace is a linked image, the channel mapping is kept and applied on the replaced image.

8.8.8. Images Side Drawer


The Images Side Drawer shows a list of all images used in the document. You can open it by clicking the **Images** button in the upper toolbar.

For every image, you get a preview, the name of the image (or "Embedded Image x" for embedded images), resolution, pixel size, dimensions and color space. In case multiple copies of the same image are used, you can expand and collapse the list of all copies, each with their properties, by clicking the triangle.



Using the buttons below the list, you can sort the images by name, by resolution or by color space.

You can select one or more images in the list, and the corresponding objects in the document will be selected as well.

If the **Zoom to Selection**  option is enabled, clicking an entry displays the selected image(s) as big as possible in the active window.

From the fly-out menu, you can apply actions on the selected images:

- Extract and Link: see [Extract and Link](#) on page 132
- Update: see [Update images](#) on page 132
- Unlink: see [Unlink / Embed and Unlink](#) on page 132
- Replace: see [Replacing an image](#) on page 136
- Edit in Editor: see [Opening images in an external editor](#) on page 135

Using **Show/Hide Info of All Copies** you can expand or collapse the information on the individual copies of all images.

8.9. Working with Placed Art

8.9.1. Place

You can place a PDF in your current document

- By selecting **File > Place**.
- By its shortcut **Cmd+Shift+P** (Mac) or **Ctrl+Shift+P** (Windows).

Important: Placing a PDF is only supported in PDF+ files. You can not place a PDF if the current document is a Normalized PDF file.

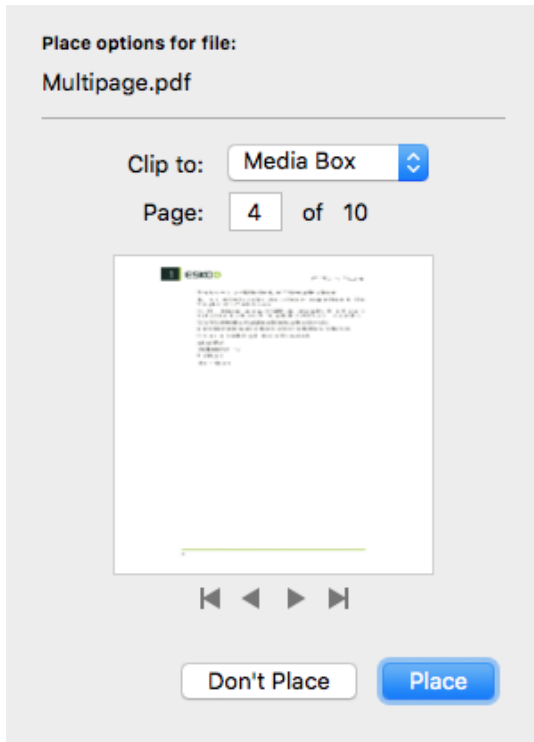
Note: Using the same **Place** function, you can place Images, PDF files and Structural Design Files. See [Place](#) on page 130 and [Place Structural Design](#) on page 144

When placing a Normalized PDF, you can automatically map specific technical inks to specific Processing Step Layers. See [Placing Normalized PDF files in a PDF+ file](#) on page 138

You can place PDF files as linked objects by enabling the **Keep Link to File** option in the Place dialog. If the option is disabled, the PDF file will be embedded. See [Linked versus Embedded Placed Art](#) on page 139

If you select multiple files, they will be placed one by one, on top of each other.

- For every PDF file you place, you can decide what Page Box defined in the file should be used to clip the placed PDF.
- When placing a multipage PDF, you can select what page to place, either by entering the page number, or by selecting it using the arrows.



When placing a PDF, all separations used in the placed art but not yet in your document will be added in the separations list. The separation order is not changed, so the separation order in the main document can be different from the order in the placed file.

Note: If you select Placed Art, the Fill and Stroke inspector will show a preview of the PDF file, and the separations used in it.

Placing Normalized PDF files in a PDF+ file

When placing a Normalized PDF in a PDF+ file, you have to take in account some specific behavior. For more information on the PDF+ file format, see [PDF, PDF+ and Normalized PDF](#) on page 43

Always embedded

When placing a Normalized PDF in a PDF+ file, the placed PDF will always be embedded. Linking to a placed Normalized PDF is not possible.

Note: Any changes done to the placed file, such as mapping technical inks (see below) are done to the embedded version only. The original Normalized PDF file is not modified.

Layers

All layers from the Normalized PDF file are kept, and can be seen when editing the placed PDF file.

Screen Sets

When placing a Normalized PDF file, the screen sets in this placed file will be merged with the screen sets already present in the current document.

Technical Inks

Technical inks will always become **Opaque** inks.

Mapping Technical Inks to Processing Step Layers

Normalized PDF does not support Processing Step Layers, while PDF+ does not support technical inks. Therefore, when placing a Normalized PDF file in a PDF+ file, you can map specific technical inks to specific Processing Step Layers. You can manage rules in the **Place PDF** section in the **Preferences**. See [Preferences](#) on page 34

If a rule is set, objects using only the defined ink will be moved to the specified Processing Step layer. These objects will end up in a layer on top of the existing layers. This can change the order of the objects. Also, moving objects to Processing Step layers can change the blend mode to "normal" and overprint can be set, similar to when manually moving objects to a Processing Step layer.

8.9.2. Linked versus Embedded Placed Art

If a Placed Art object is **Embedded**, this means the actual Placed Art information is saved in the file.

If a Placed Art object is **Linked**, this means the reference to the external file is saved in the file.

PDF+ files

A PDF+ file (see [PDF, PDF+ and Normalized PDF](#) on page 43), saved in ArtPro+, can contain

- only the **embedded** version of a Placed Art object.
- both the **link** and the **embedded** version.

This means that if you place a Placed Art object (see [Place](#) on page 137) using the **Keep Link to file** option enabled, both the link AND the embedded version will be saved in the file. The same will happen when you open and save a 3rd party PDF containing (only) links to Placed Art. See below.

Note: If you place a Normalized PDF in a PDF+ file, it will always be embedded.

Normalized PDF

If you open a Normalized PDF containing Placed Art created in another application, this will be recognised as such. However, you will not have the same possibilities as in a PDF+ file (no Die Shape, no Create Grid, no Place).

Other PDF files

Placed Art in PDF files from other sources can be

- only **embedded**
- both **embedded** and **linked**
- only **linked**

This last option is not possible in PDF+ files. This means that saving it (to PDF+) will add the embedded version to the document. See above.

When opening a file, and when navigating to a different page in a PDF+ file, ArtPro+ will check for missing and/or out of date files. See [Missing and out-of-date files](#) on page 41

Unlink

Unlink will remove the link to the file on disk and only keep an embedded version in the document

1. Select the linked placed art you want to embed
2. Select **Object > Placed Art > Unlink**, or click the **Unlink** button in the Placed Art Inspector

Update

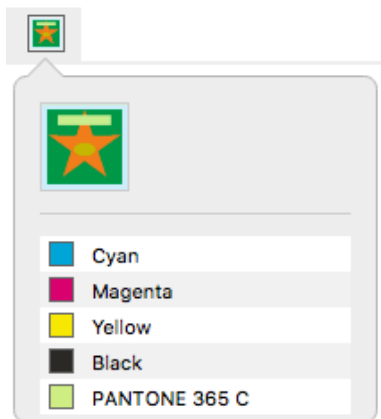
Update will check if the file on disk has been changed, and if so, update the preview in the document.

You can either choose **Object > Placed Art > Update**, or click the **Update** button in the Placed Art Inspector.

Separations used in the updated PDF but not yet in your document will be added in the separations list.

8.9.3. Placed Art Separations Inspector

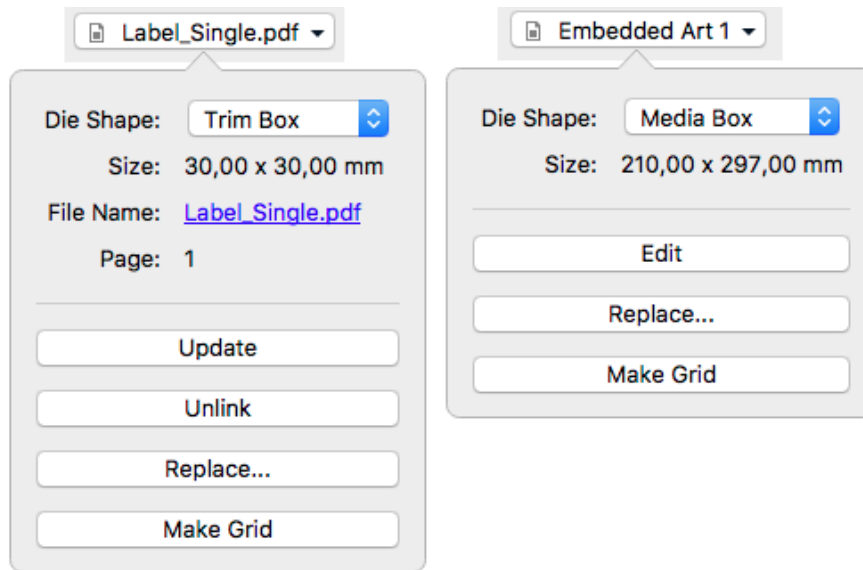
If the selection contains placed art, the **Placed Art Separations Inspector** will be available.



The Placed Art Separations Inspector gives a preview of the Placed Art, and a list of the separations used in it.

8.9.4. Placed Art Inspector

If the selection contains placed art, the **Placed Art Inspector** will be available.



The Placed Art Inspector will show all properties of the selected placed PDF:

- the **Die Shape** of the PDF that is used. Use the dropdown to select:
 - a Page Box defined in the Placed Art
 - The Processing Step Cutting layer, when available
 - Any of the separations in the Placed Art. In that case, the die shape is determined by the joint shape of all applicable objects in that separation.

Note: If you are opened an MFG file, the Placed Art Inspector will show the name of the Layout file (.mfg), the selected Structural Design file (.ard), the Print Item when defined in ArtiosCAD, and the dimensions. See [Step & Repeat based on an MFG file](#) on page 209

- the **Size** of the file. Changing the **Die Shape** can also change the **Size**
- The **Edit** button. See [Edit Placed Art](#) on page 142
- The **Replace** button. See [Replace Placed Art](#) on page 143
- The **Make Grid**, to create a Step&Repeat of the selected placed art. See [Step & Repeat](#) on page 199

For Linked PDFs, you will also see:

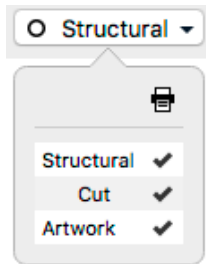
- **File Name:** the name of the linked PDF file. If the name is underlined and blue, the name works as a link to open the file location in Finder (Mac) or Windows Explorer (Windows). If the name is underlined but gray, it means the link can (temporarily) not be found.
- The **Page** of the multipage PDF that was placed.
- The **Update** button. See [Update](#) on page 140
- The **Unlink** button. See [Unlink](#) on page 140

When selecting a Grid, the Placed Art inspector will also allow to change the initial **Orientation** of the one-ups in this grid. Their orientation within the layout can be changed further by the option **Head Turn**. See [Grid Step & Repeat](#) on page 199

8.9.5. Layer Types Inspector

If the selection contains one or more Placed PDF files and/or a placed Structural Design file, the **Layer Types Inspector** will be available.

It will show all Processing Step Layer types that are used in any of the selected Placed Art objects.



By clicking the checkmarks you can change the printing state for all layers of the selected type.

You can Alt-click a printing state field to turn its printing state on, while disabling printing for all other layers. Alt-clicking it again will revert to the previous situation.

Note: For Linked Placed Art, the **Update** function will revert the printing states to their original values.

8.9.6. Edit Placed Art

If you want to edit the content of a Placed Art object, you can do so in different ways.

- Embedded Placed Art object can be edited in a separate **Editing mode**.
 - a) Select the embedded Placed Art you want to edit
 - b) Select **Object > Placed Art > Edit** or hold the **Alt** key and double-click the Placed Art.
The Placed Art will be opened in a special Editing mode on top of your document window, where you can edit the embedded Placed Art.
 - c) Click the **Back to Document** button to close the Editing mode, and return to your document window.
The preview of the Placed Art is automatically updated.
- Linked Placed Art objects can be edited in ArtPro+ as any other PDF file
 - a) Locate the linked file in Finder (Mac) or Explorer (Window), e.g. by clicking the file name in the Placed Art Inspector. See [Placed Art Inspector](#) on page 140
 - b) Open the file, either using the **Open** function, or by drag and dropping the file into ArtPro+.
The Placed Art will be opened in a regular ArtPro+ window. Unlike when editing an embedded Placed Art, you can switch back and forth between this window and your document window.

- c) When you're done editing, you can save and close the external PDF window.
Please note that the preview of the Placed Art is **not** automatically updated. Use [Update](#) on page 140.
- You can **Expand** the placed art, replacing the Placed Art by its actual contents, using **Object > Expand**
After expanding, all the objects from the Placed Art will be placed in a group, which you can further edit as regular objects.

8.9.7. Replace Placed Art

Using the **Replace** button in the Placed Art Inspector, you can replace the selected Placed Art by another PDF file.

1. Select the Placed Art you want to replace
2. In the Placed Art Inspector, click the **Replace** button
3. Select the PDF file you want to replace the selected Placed Art.
4. Click **Replace**

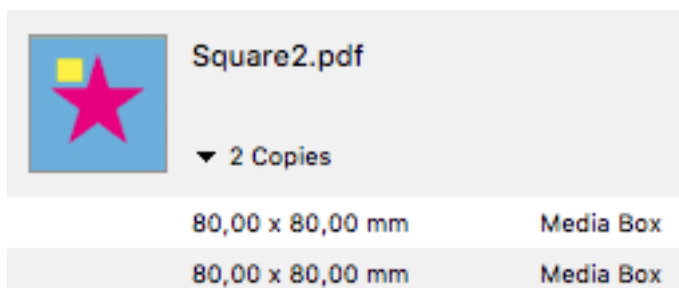
The newly placed file will use the same position as the original one, and the same setting (page box, ...) is used as die shape. The size of the new placed file is used.

Replace will replace all copies of that Placed Art on every page of the document.


8.9.8. Placed Art Side Drawer

The Placed Art Side Drawer shows a list of all placed PDFs used in the document. You can open it by clicking the **Placed Art** button in the upper toolbar.

For every placed art, you get a preview, the name of the linked PDF or "Embedded Image x" for embedded PDFs, the placed page of a multipage document, the dimensions and the used Page Box. In case multiple copies of the same PDF are used, you can expand and collapse the list of all copies, each with their properties, by clicking the triangle.



You can select one or more entries in the list, and the corresponding objects in the document will be selected as well.

If the **Zoom to Selection**  option is enabled, clicking an entry displays the selected placed art as big as possible in the active window.

In the bottom right corner there is a fly-out menu containing all available actions for the selected placed art:

- **Edit.** See [Edit Placed Art](#) on page 142
- **Replace.** See [Replace Placed Art](#) on page 143
- **Update.** See [Update](#) on page 140
- **Unlink.** See [Unlink](#) on page 140

8.10. Working with Structural Design files

8.10.1. Place Structural Design

You can place a Structural Design file in your current document.

- By selecting **File > Place**.
- By its shortcut **Cmd+Shift+P** (Mac) or **Ctrl+Shift+P** (Windows).

Note: Using the same **Place** function, you can place Images, PDF files and Structural Design Files. See [Place](#) on page 130 and [Place](#) on page 137

Currently only ARD files are supported. You can't place an MFG file, but you can open it. See [Step & Repeat based on an MFG file](#) on page 209

A Structural Design file is always **Linked**. This means that if you place a Structural Design file, both the link AND the embedded version will be saved in the file, even if the **Keep Link to file** option is disabled.

When opening a file, and when navigating to a different page in a PDF+ file, ArtPro+ will check for missing and/or out of date files. See [Missing and out-of-date files](#) on page 41

When placing a Structural Design file, ArtPro+ uses a fixed color scheme for the different line types, comparable to the color scheme used in other Esko applications such as ArtiosCAD or DeskPack. What lines are shown, depends on the Profile, either the default profile defined in the Preferences or (in a PDF+ file) the profile set in the Structural Design Inspector. See [Structural Design Inspector](#) on page 145

PDF+

If the Structural Design is placed in a PDF+ file, every line type is put in a corresponding Processing Step layer. You can see these layers (and change their printability) in the Layer Types Inspector if you have the Structural Design selected. See [Layer Types Inspector](#) on page 142

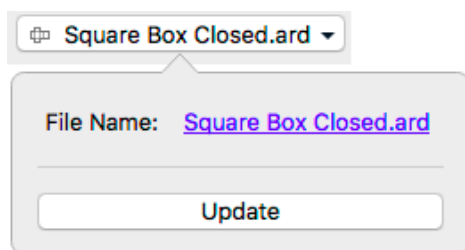
Normalized PDF

If the Structural Design is placed in a Normalized PDF, every line type is put in a corresponding Technical ink.

Normalized PDF files can contain only one placed Structural Design file. If the file already contains a placed Structural Design file, you won't be able to add another one in ArtPro+.

8.10.2. Structural Design File inspector

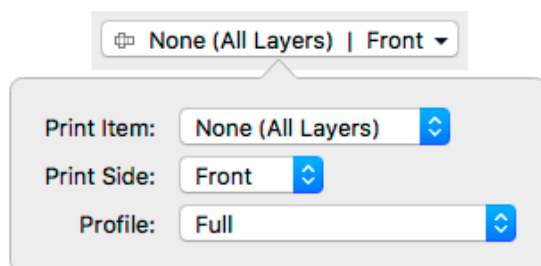
If the selection contains placed Structural Designs, the **Structural Design File Inspector** will be available.



- **File Name:** the name of the linked Structural Design file. If the name is underlined and blue, the name works as a link to open the file location in Finder (Mac) or Windows Explorer (Windows). If the name is underlined but gray, it means the link can (temporarily) not be found. In that case, the Update button will be replaced by a **Browse** button.
- The **Update** button. **Update** will check if the file on disk has been changed, and if so, update the preview in the document.

8.10.3. Structural Design Inspector

If the selection contains at least one placed Structural Design, the **Structural Design Inspector** will be available.



When defined in the file, you can select a **Print Item**. A Print Item is a collection of visible layers defined in ArtiosCAD. Layers not in the Print Item will not be shown.

You can also define what **Print Side** you want to use: Back or Front. This implies that, if e.g. an Inside Bleed line type is defined in the ARD file, it will only appear when "Back" is selected. An Outside Bleed line type will only appear when "Front" is selected.

By default the Structural Design file is shown using the default profile defined in the Preferences. See [Preferences](#) on page 34

In PDF+ files, you can however overrule this setting and define the **Profile** to be used:

- **Cut and Creases:** Only Cut and Crease lines are shown.
- **Dimensions:** Cut, Creases and Dimensions are shown.
- **Full:** all line types are shown.
- **Full (Single Separation):** All line types are shown, all using a single separation (either a Technical Ink in Normalized PDF, or a Processing Step layer in PDF+ files). To make the different line types visible, every line type will have a different type: full lines for cut lines, dotted for crease lines, etc.

In Normalized PDF files, the default profile is always used.

9. Prepress functions

Next to the normal editing functions, ArtPro+ contains a number of specific Prepress functionality, such as Barcodes, Screening, etc.

9.1. Barcodes

You can create a new barcode by using the **Create Barcode** function. See [Create a barcode](#) on page 148

Barcodes created in ArtPro+, or supported barcodes in an opened file can be edited by selecting it and changing its settings in the Barcode Inspector. See [Edit a barcode](#) on page 148

Note: You can use **Expand** to convert a barcode in a regular object. See [Expand](#) on page 108

Supported barcodes:

The barcodes listed in [The Barcode types](#) on page 149 are supported in the following cases:

- if they were created in ArtPro+
- if they were generated by PackEdge or DeskPack and saved in Normalized PDF files
- if they were generated in ArtPro and saved as ArtPro file

Currently not supported:

- Barcodes generated by other applications, in a regular PDF (not a Normalized PDF)
- Barcodes created in ArtPro and exported as PDF.
- Other types of barcodes

Regenerating barcodes

Barcodes created in other applications are kept unchanged after opening the file. However, if you change one of the parameters, or scale the barcode, the barcode will be regenerated. In some cases this will cause a change in the visual appearance of the barcode:

- Barcodes in ArtPro can have options that are not supported in ArtPro+, such as corner marks. A warning will be shown when opening the file. These unsupported options can disappear when the barcode is regenerated.
- Barcodes generated by ArtPro can also have a slightly different appearance than those generated in other Esko applications like ArtPro+, DeskPack or PackEdge: the Light Margin Indicator has a slightly different shape, small differences in text spacing for Code 39 codes, etc. The appearance will be adjusted when the barcode is regenerated.

- Also for barcodes coming from other applications, there might be a change in the visual appearance after regenerating, for example if the barcode was written incorrectly or inaccurately.

9.1.1. Create a barcode

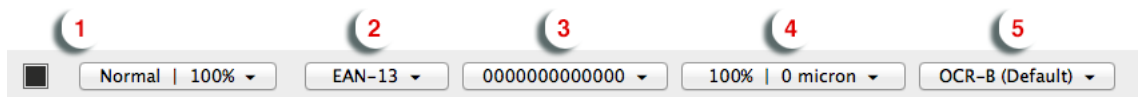
You can create a new barcode in different ways:

-  Click the **Create Barcode** button.
- Select **Prepress > Add Barcode**
- Use the shortcut **Cmd+Shift+B** (Mac) or **Ctrl+Shift+B** (Windows)

If the Crosshair is visible, the barcode will be created at the center of the Crosshair. If the Crosshair is hidden, the barcode will be created on the center of the document pane. By default, the barcode is an EAN-13 code, uses all zeros as code, and is colored in the darkest printing separation. You can change its settings afterwards in the **Barcode Inspector**. See [Edit a barcode](#) on page 148

9.1.2. Edit a barcode

If you select one or more barcodes (and no other objects), you can use the different barcode related Inspectors.



If all selected barcodes have the same value (e.g. code, Magnification, ...), the Barcode Inspector will show this value. Otherwise, it will show the ≠ symbol.


1. Click the color patch to change the color of the barcode, and use the Transparency inspector to change the transparency settings. See [Flat Color](#) on page 112 and [Transparency Inspector](#) on page 118
2. Set the **Code Type** in the Barcode Type Inspector.
Depending on the selected barcode, an additional setting can be made, such as **Supplemental Digits** or **Code Set**. Check [The Barcode types](#) on page 149
3. Set the **Code** for the selected barcodes in the Barcode Code Inspector.
When possible, ArtPro+ will automatically fix errors in the **Barcode** code. Possible fixes are correcting a wrong check digit, adding a missing check digit, or adding a leading zero for e.g. a UPC-E barcode. You will be warned whenever ArtPro+ adjusts the entered code.
4. Click the button showing a few key settings (such as magnification) to open the **Barcode Inspector**. The properties in this Inspector define the appearance of the bar code (height, bar with, ...). The available options depend on the selected barcode. Check the properties for a specific barcode in [The Barcode types](#) on page 149
5. Click the button showing the currently selected font to open the **Barcode Font Inspector**. The properties in this Inspector define the text in barcodes. The available options depend

on the selected barcode. Check the properties for a specific barcode in [The Barcode types](#) on page 149

9.1.3. The Barcode types

An overview of the parameters and properties per barcode type.

2 of 5

Info	2 of 5 is a numeric self-checking barcode, which can have a variable length. This barcode only encodes data in the bars. It is used for industrial applications, article numbering, photo development and ticketing.
Example	
Input	unlimited amount of digits
Check Digit	None

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Narrow Bar Ratio

This parameter determines the ratio between the width of the widest bar and the width of the narrowest bar of your barcode. It does not affect the width of your barcode proportionally.

Changing this parameter will adjust the **Narrow Bar** parameter.

Character Frequency

This parameter determines the amount of character per millimeter or per inch, depending on the setting in the Preferences (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Narrow Bar** parameter. It is only available when using the default font.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.


Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top**, **Bottom**, **Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

Code 39

Info	Code 39 is a popular barcode in industrial barcoding systems, mainly in the U.S.A. It is used in the non-retail industry, particularly in the manufacturing, military, and health sectors. It can encode alphanumeric data.
Example	
Input	Maximum 128 characters (digits and capitals)
Check Digit	The automatically added check digit is optional.

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Narrow Bar Ratio

This parameter determines the ratio between the width of the widest bar and the width of the narrowest bar of your barcode. It does not affect the width of your barcode proportionally.

Changing this parameter will adjust the **Narrow Bar** parameter.

Character Frequency

This parameter determines the amount of character per millimeter or per inch, depending on the setting in the Preferences (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Narrow Bar** parameter. It is only available when using the default font.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution


Use this to adjust specific barcode parameters (**Bar Width Reduction**, **Device Compensation**, **Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.

Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top**, **Bottom**, **Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

Code 128

Info	Code 128 is a variable length, high density, alphanumeric barcode. It has the second highest density of all the 1D barcodes (after the GS1 Databar Expanded). After selecting the barcode type, you can set the Code Set . By default this is set to Automatic . In that case, the encoding type is chosen automatically, to optimize the content encoding. To obtain an optimal utilization of the code-sets A and B but prevent the usage of the space saving code-set C, set the Code Set to Long . Select A or B to force the usage of the specific code-set A or B.
Example	
Input	Maximum 128 characters (digits and letters)
Check Digit	none.

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Character Frequency

This parameter determines the amount of character per millimeter or per inch, depending on the setting in the Preferences (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Narrow Bar** parameter. It is only available when using the default font.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Add light margin indicator

Use this option to add light margin indicators before (" $<$ ") and/or after (" $>$ ") the barcode number

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.


Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top, Bottom, Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

Data Matrix

Info	<p>Data Matrix is used for encoding large amounts of alphanumeric data and / or marking small objects. It can encode all the standard ASCII and extended ASCII characters.</p> <p>The Data Matrix symbol size can adjust automatically depending on the amount of data.</p> <p>Note: ArtPro+ always generates Data Matrix symbols with the recommended ECC200 error correction scheme.</p>
Example	
Input	unlimited
Check Digit	none

Barcode Parameters

Symbol Size

The amount of Cells in a barcode. The Symbol Size will automatically increase when entering too much data for the current symbol size.

Cell Size

The size of a single black or white square.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.


Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.


Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top**, **Bottom**, **Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

EAN-8

Info	EAN-8 is an abbreviated version of EAN-13 (see EAN-13 on page 157), for use on smaller packages. It contains eight digits of data.
Example	
Input	The input for an EAN-8 code is 8 digits.
Check Digit	The 8th digit is a check digit.

Barcode Parameters

Magnification

Use this parameter to increase or decrease the width of the barcode. Changing the Magnification will also change the Font Size and Vertical Offset.

By entering "0" in the input field, you can reset the Magnification to its default value (100%).



Attention: Changing the **Magnification** does not change the **Height** of the barcode. You can however reset the Height by entering "0". The Height will be proportionally scaled to the current Magnification.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Add light margin indicator

Use this option to add light margin indicators before (" $<$ ") and/or after (" $>$ ") the barcode number

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.


Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top, Bottom, Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size


By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

EAN-13

Info	<p>European Article Numbering system or EAN is the standard for article numbering in Europe. It is also used in Japan where it is called JAN.</p> <p>Note: EAN is the European equivalent of the UPC system in the U.S.A. and Canada. Both systems use the same size requirements and a similar encoding scheme. This means that most European and American retail barcode scanners can read both EAN and UPC barcodes. For more information on UPC, see UPC-A on page 177.</p>
Example	
Input	<p>The input for an EAN 13-code is 13 digits, with optionally 2 or 5 supplemental digits, if set in the Code Type dialog.</p>
Check Digit	<p>The 13th digit is a check digit.</p>
Recommendations	<p>Magnification: between 80% and 200%</p>

Barcode Parameters

Magnification

Use this parameter to increase or decrease the width of the barcode. Changing the Magnification will also change the Font Size and Vertical Offset.

By entering "0" in the input field, you can reset the Magnification to its default value (100%).



Attention: Changing the **Magnification** does not change the **Height** of the barcode. You can however reset the Height by entering "0". The Height will be proportionally scaled to the current Magnification.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Add light margin indicator

Use this option to add light margin indicators before ("<") and/or after (">") the barcode number

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.


Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top, Bottom, Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.


By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

GS1 128

Info	GS1 128 is based on Code 128 but has a double start sequence. See Code 128 on page 152
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Example	
Input	<p>Maximum 128 characters (digits and letters)</p> <p>GS1 barcodes consist of 1 or multiple codes that start with so-called Application Identifiers (AI) - 2 digit codes that indicate a specific goal. For example: AI 11 indicates a production date, AI 17 an expiration date, AI 10 a batch or lot number, etc. The Application Identifiers require specific input, for example AI 11 and AI 17 are fixed and require 6 digits, AI 10 is variable and can contain up to 20 alphanumeric characters.</p> <p>If multiple AIs are allowed, they can be entered in multiple ways:</p> <ul style="list-style-type: none"> • Just enter the codes one after the other, without any spaces. In this case you should enter fixed size Application Identifiers (AI) first, and AI with a variable length last to allow a correct validation of the barcode. • Put the AI between brackets. In that case it is clear where one code ends and another one begins, so variable AIs can be put at the start if so desired. • At the end of an AI, type "[F1]" before entering the next AI • For an even higher readability: use Shift-Enter to start a new AI at the next line
Check Digit	depending on Application Identifier

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.


Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top, Bottom, Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Position text above barcode

This option places the text above the barcode instead of below.

Wrap text

This option allows to put the text on multiple lines, one line per AI.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset


Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

GS1 Databar Expanded - Expanded Stacked

Info	<p>GS1 DataBar Expanded (formerly RSS Expanded) encodes regular barcode data ("primary item identification" data) and Application Identifiers. It can encode alphanumeric characters.</p> <p>This barcode can be scanned omnidirectionally by suitably programmed slot scanners.</p>
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	GS1 DataBar Expanded Stacked can encode the same amount of data as GS1 DataBar Expanded, but can also “stack” the barcode into several rows to save space.
Example	
Input	<p>GS1 barcodes consist of 1 or multiple codes that start with so-called Application Identifiers (AI) - 2 digit codes that indicate a specific goal. For example: AI 11 indicates a production date, AI 17 an expiration date, AI 10 a batch or lot number, etc. The Application Identifiers require specific input, for example AI 11 and AI 17 are fixed and require 6 digits, AI 10 is variable and can contain up to 20 alphanumeric characters.</p> <p>If multiple AIs are allowed, they can be entered in multiple ways:</p> <ul style="list-style-type: none"> • Just enter the codes one after the other, without any spaces. In this case you should enter fixed size Application Identifiers (AI) first, and AI with a variable length last to allow a correct validation of the barcode. • Put the AI between brackets. In that case it is clear where one code ends and another one begins, so variable AIs can be put at the start if so desired. • At the end of an AI, type "[F1]" before entering the next AI • For an even higher readability: use Shift-Enter to start a new AI at the next line
Check Digit	depending on Application Identifier

Barcode Parameters

Maximum Row Segments

Use this parameter to define how many segments of data (groups of bars encoding several digits) can fit in one row. If the barcode contains more segments, they will be stacked.

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.

Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Position text above barcode

This option places the text above the barcode instead of below.

Wrap text

This option allows to put the text on multiple lines, one line per AI.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset


Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

GS1 Databar Omnidirectional

Info	GS1 DataBar Omnidirectional encodes Global Trade Item Numbers (GTIN) in a linear symbol that can be scanned omnidirectionally by suitably programmed slot scanners
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Example	
Input	The GS1 Omnidirectional barcode only allows 1 identifier, of type 01. The input is 14 digits, which means that the Application Identifier itself has to be omitted.
Check Digit	last digit

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.

Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Position text above barcode

This option places the text above the barcode instead of below.

Wrap text

This option allows to put the text on multiple lines, one line per AI.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

GS1 Databar Stacked

Info	GS1 DataBar Stacked is a variation of the GS1 DataBar barcode, that is stacked in two rows and used when the normal barcode would be too wide for the product.
Example	<p>(1 1) 1 2 3 4 5 6 (1 7) 1 8 9 9 8 6</p>  <p>(0 1) 0 0 0 0 0 0 0 0 0 0 0 0 0 0</p>
Input	<p>GS1 barcodes consist of 1 or multiple codes that start with so-called Application Identifiers (AI) - 2 digit codes that indicate a specific goal. For example: AI 11 indicates a production date, AI 17 an expiration date, AI 10 a batch or lot number, etc. The Application Identifiers require specific input, for example AI 11 and AI 17 are fixed and require 6 digits, AI 10 is variable and can contain up to 20 alphanumeric characters.</p> <p>If multiple AIs are allowed, they can be entered in multiple ways:</p> <ul style="list-style-type: none"> • Just enter the codes one after the other, without any spaces. In this case you should enter fixed size Application Identifiers (AI) first, and AI with a variable length last to allow a correct validation of the barcode. • Put the AI between brackets. In that case it is clear where one code ends and another one begins, so variable AIs can be put at the start if so desired. • At the end of an AI, type "[F1]" before entering the next AI • For an even higher readability: use Shift-Enter to start a new AI at the next line
Check Digit	depending on Application Identifier

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.

Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Position text above barcode

This option places the text above the barcode instead of below.

Wrap text

This option allows to put the text on multiple lines, one line per AI.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

GS1 Databar Stacked Omnidirectional

Info	GS1 DataBar14 Stacked Omnidirectional is taller version of GS1 DataBar14 Stacked, that can be read by omnidirectional scanners.
Example	<p>(11) 123456 (17) 189986</p>  <p>(01) 0000000000000000</p>
Input	<p>GS1 barcodes consist of 1 or multiple codes that start with so-called Application Identifiers (AI) - 2 digit codes that indicate a specific goal. For example: AI 11 indicates a production date, AI 17 an expiration date, AI 10 a batch or lot number, etc. The Application Identifiers require specific input, for example AI 11 and AI 17 are fixed and require 6 digits, AI 10 is variable and can contain up to 20 alphanumeric characters.</p> <p>If multiple AIs are allowed, they can be entered in multiple ways:</p> <ul style="list-style-type: none"> • Just enter the codes one after the other, without any spaces. In this case you should enter fixed size Application Identifiers (AI) first, and AI with a variable length last to allow a correct validation of the barcode. • Put the AI between brackets. In that case it is clear where one code ends and another one begins, so variable AIs can be put at the start if so desired. • At the end of an AI, type "[F1]" before entering the next AI • For an even higher readability: use Shift-Enter to start a new AI at the next line
Check Digit	depending on Application Identifier

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction**, **Device Compensation**, **Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.

Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Position text above barcode

This option places the text above the barcode instead of below.

Wrap text

This option allows to put the text on multiple lines, one line per AI.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

GS1 DataMatrix

Info	The GS1 DataMatrix barcode is a high density, high capacity, scalable 2D barcode. It is used to concentrate a lot of (alphanumeric) information in a very small space.
Example	 <p>(01)12345678901231 (11)123456 (17)987654</p>
Input	<p>GS1 barcodes consist of 1 or multiple codes that start with so-called Application Identifiers (AI) - 2 digit codes that indicate a specific goal. For example: AI 11 indicates a production date, AI 17 an expiration date, AI 10 a batch or lot number, etc. The Application Identifiers require specific input, for example AI 11 and AI 17 are fixed and require 6 digits, AI 10 is variable and can contain up to 20 alphanumeric characters.</p> <p>If multiple AIs are allowed, they can be entered in multiple ways:</p> <ul style="list-style-type: none"> • Just enter the codes one after the other, without any spaces. In this case you should enter fixed size Application Identifiers (AI) first, and AI with a variable length last to allow a correct validation of the barcode. • Put the AI between brackets. In that case it is clear where one code ends and another one begins, so variable AIs can be put at the start if so desired. • At the end of an AI, type "[F1]" before entering the next AI • For an even higher readability: use Shift-Enter to start a new AI at the next line
Check Digit	depending on Application Identifier

Barcode Parameters

Symbol Size

The amount of Cells in a barcode. The Symbol Size will automatically increase when entering too much data for the current symbol size.

Cell Size

The size of a single black or white square.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.


Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top**, **Bottom**, **Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Position text above barcode

This option places the text above the barcode instead of below.

Wrap text

This option allows to put the text on multiple lines, one line per AI.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset


Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

Interleaved 2 of 5

Info	Interleaved 2 of 5 (or Int. 2 of 5) is a barcode originally used for transportation packaging, that can have any even number of digits. Since this type of packaging consists mainly of cardboard boxes printed in low quality, the Interleaved 2 of 5 barcode is more tolerant to distortion than other barcodes.
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Example	
Input	unlimited amount of digits
Check Digit	None

Barcode Parameters

Narrow Bar

This parameter determines the width of the narrowest bar of your barcode (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Character Frequency**.

Narrow Bar Ratio

This parameter determines the ratio between the width of the widest bar and the width of the narrowest bar of your barcode. It does not affect the width of your barcode proportionally.

Changing this parameter will adjust the **Narrow Bar** parameter.

Character Frequency

This parameter determines the amount of character per millimeter or per inch, depending on the setting in the Preferences (and affects the width of your barcode proportionally).

Changing this parameter will adjust the **Narrow Bar** parameter. It is only available when using the default font.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation


Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top**, **Bottom**, **Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

ITF-14

Info	ITF-14 is a standardized version of the Interleaved 2 of 5 barcode, containing 14 digits, the last being a check digit.
Example	
Input	The input for an ITF-14 code is 14 digits.
Check Digit	The 14th digit is a check digit.

Barcode Parameters

Magnification

Use this parameter to increase or decrease the width of the barcode. Changing the Magnification will also change the Font Size and Vertical Offset.

By entering "0" in the input field, you can reset the Magnification to its default value (100%).



Attention: Changing the **Magnification** does not change the **Height** of the barcode. You can however reset the Height by entering "0". The Height will be proportionally scaled to the current Magnification.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.

Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Printable Gauges

Use this option to add the printability gauges ("H" marks) either side of your barcode. Use the Smax and Smin parameters to define the size. Smax defines the width of the left "H", Smin defines the width of the right "H".

Add Bearer Bars

Use this option to add bearer bars to your barcode

- Set the **Width** of the bearer bars
- Define the **Placement**: either Top and bottom, or all sides
- Use the **Top, Bottom, Left** and **Right** fields to add a white margin between your barcode and the bearer bars. You can enter a different margin for the top, left, right and bottom, or

by enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.


Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

ITF-16

Info	ITF-16 is a standardized version of the Interleaved 2 of 5 barcode, containing 16 digits, the last being a check digit.
Example	
Input	The input for an ITF-16 code is 16 digits.
Check Digit	The 16th digit is a check digit.

Barcode Parameters

Magnification

Use this parameter to increase or decrease the width of the barcode. Changing the Magnification will also change the Font Size and Vertical Offset.

By entering "0" in the input field, you can reset the Magnification to its default value (100%).



Attention: Changing the **Magnification** does not change the **Height** of the barcode. You can however reset the Height by entering "0". The Height will be proportionally scaled to the current Magnification.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.

Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Printable Gauges

Use this option to add the printability gauges ("H" marks) either side of your barcode. Use the Smax and Smin parameters to define the size. Smax defines the width of the left "H", Smin defines the width of the right "H".

Add Bearer Bars

Use this option to add bearer bars to your barcode

- Set the **Width** of the bearer bars
- Define the **Placement**: either Top and bottom, or all sides
- Use the **Top, Bottom, Left** and **Right** fields to add a white margin between your barcode and the bearer bars. You can enter a different margin for the top, left, right and bottom, or

by enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset


Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment

Using the buttons, you can set the alignment of the text to left, centered or right.

Micro QR

Info	The Micro QR Code is a very small QR Code for use on smaller spaces (for example to encode the ID of printed circuit boards and electronics parts).
------	---

	It works with smaller amounts of data (maximum 35 numeric characters), and uses only one position pattern.
Example	
Input	35
Check Digit	None

Barcode Parameters

Symbol Size

The amount of Cells in a barcode. The Symbol Size will automatically increase when entering too much data for the current symbol size.

Error Correction

Error correction adds check sums to the barcode to detect and correct incorrect data. You can choose one of the following Error correction levels:

- Level L: 7% of codewords can be restored.
- Level M: 15% of codewords can be restored.
- Level Q: 25% of codewords can be restored.
- Level H: 30% of codewords can be restored. (Not available for Micro QR)

Note: Keep in mind that a higher correction level makes the barcode bigger (as more check sums are added to the barcode) and may limit the maximum length of the encoded data.

Cell Size

The size of a single black or white square.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation


Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.


Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top**, **Bottom**, **Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by enabling the **Lock** button  you can set one margin for all 4 sides.

QR

Info	<p>The QR barcode is a 2-dimensional barcode used for commercial tracking and convenience-oriented applications aimed at mobile phone users (known as "mobile tagging").</p> <p>QR codes storing addresses and URLs may appear in magazines, on signs, buses, business cards, or other objects... Users with a camera phone equipped with the correct reader application can scan the QR code to display text, contact information, connect to a wireless network, or open a web page in the phone's browser.</p>
Example	
Input	Unlimited
Check Digit	None

Barcode Parameters

Symbol Size

The amount of Cells in a barcode. The Symbol Size will automatically increase when entering too much data for the current symbol size.

Error Correction

Error correction adds check sums to the barcode to detect and correct incorrect data. You can choose one of the following Error correction levels:

- Level L: 7% of codewords can be restored.
- Level M: 15% of codewords can be restored.
- Level Q: 25% of codewords can be restored.
- Level H: 30% of codewords can be restored. (Not available for Micro QR)

Note: Keep in mind that a higher correction level makes the barcode bigger (as more check sums are added to the barcode) and may limit the maximum length of the encoded data.

Cell Size

The size of a single black or white square.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.


Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.


Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top**, **Bottom**, **Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

UPC-A

Info	Universal Product Code or UPC is the standard for article numbering in the U.S.A. and Canada. It is similar to the EAN system and compatible with it. For more information on EAN, see EAN-13 on page 157.
Example	
Input	The input for an UPC-A code is 12 digits starting with a zero, with optionally 2 or 5 supplemental digits, if set in the Code Type dialog.
Check Digit	The 12th digit is a check digit.

Barcode Parameters

Magnification

Use this parameter to increase or decrease the width of the barcode. Changing the Magnification will also change the Font Size and Vertical Offset.

By entering "0" in the input field, you can reset the Magnification to its default value (100%).



Attention: Changing the **Magnification** does not change the **Height** of the barcode. You can however reset the Height by entering "0". The Height will be proportionally scaled to the current Magnification.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Add light margin indicator

Use this option to add light margin indicators before ("<") and/or after (">") the barcode number

Note: The light margin indicators are only available when using 5 additional digits.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.


Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top, Bottom, Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size


By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

UPC-E

Info	<p>Universal Product Code or UPC is the standard for article numbering in the U.S.A. and Canada. It is similar to the EAN system and compatible with it. For more information on EAN, see EAN-13 on page 157.</p> <p>UPC-E is an abbreviated version of UPC-A, for use on smaller packages.</p>
Example	
Input	<p>The input for an UPC-E code is 8 digits, starting with a zero. You can also enter a 12 digit code, if it can be compressed into an 8 digit code. Optionally 2 or 5 supplemental digits, if set in the Code Type dialog.</p>
Check Digit	<p>The 8th digit is a check digit.</p>

Barcode Parameters

Magnification

Use this parameter to increase or decrease the width of the barcode. Changing the Magnification will also change the Font Size and Vertical Offset.

By entering "0" in the input field, you can reset the Magnification to its default value (100%).



Attention: Changing the **Magnification** does not change the **Height** of the barcode. You can however reset the Height by entering "0". The Height will be proportionally scaled to the current Magnification.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.

Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Snap Bars to Output Resolution and Output resolution

Use this to adjust specific barcode parameters (**Bar Width Reduction, Device Compensation, Magnification** and **Font Size**) so that the bars' width take up a complete number of pixels or dots.


Enable **Snap Bars to Output Resolution** and enter the resolution you will use to print your barcode in ppi. Everytime a value is adjusted because of this option, a warning will be shown.

By entering "0" in the input field, you can reset the Output Resolution to its default value (2540 ppi).

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top, Bottom, Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size


By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Laetus Pharma

Info	<p>This barcode was developed specifically to meet the requirements of the pharmaceutical packaging process. It has established itself as the worldwide pharmaceutical industry barcode standard. It can encode numeric or binary data.</p> <p>In the Code Type dialog you can choose between the normal or the miniature version of the barcode.</p>
Example	
Input	<p>The input for a Laetus code is maximum 10 digits if input is decimal, and maximum 32 for binary input.</p>

Check Digit	None
-------------	------

Barcode Parameters

Narrow Bar, Narrow Bar Ratio, Wide Bar, Gap

The **Narrow Bar, Narrow Bar Ratio, Wide Bar** and **Gap** values define the width of the narrow bars, wide bars, gaps in between the bars and the ratio. Changing the width of the narrow or wide bar will affect the Narrow Bar Ratio value.

Height

The height you enter is the combined height of the bars and the human readable characters. Your barcode needs to be tall enough to be read easily by barcode scanners.

Bar Width Reduction.

Use this to adjust the width of barcode bars, in order to compensate for ink bleeding when printing on your substrate.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Device Compensation

Use this if your printer gave you a separate device bleed value. This parameter adjusts the bar's width to compensate for bleed caused by the plate or film making process.


Note: If you use both a Bar Width Reduction and a Device Compensation value, the **Barcode Inspector** will add them to adjust the bar's width.

Tip: You can enter a negative value if you want to print thicker and not thinner bars.

Add Box

Use this parameter to create an opaque white box under your barcode.

Use the **Top, Bottom, Left** and **Right** fields to add a white margin around your barcode and make the box bigger. You can enter a different margin for the top, left, right and bottom, or by

enabling the **Lock** button  you can set one margin for all 4 sides.

Barcode Text Parameters

Add human readable text

This option defines if the barcode's code should be visible as normal text. By default this option is enabled.

Font Family, Font Style and Size

By default the digits are vectorized from the standard OCR-B font. You can use real text by selecting a font family. You can also define the style and size.

By entering "0" in the Size input field, you can reset the text size to the default value for the selected barcode type.

Offset

Use this parameter to apply a vertical offset to the text of the barcode. A positive value moves the text down, a negative value moves the text up.

Alignment


Using the buttons, you can set the alignment of the text to left, centered or right.

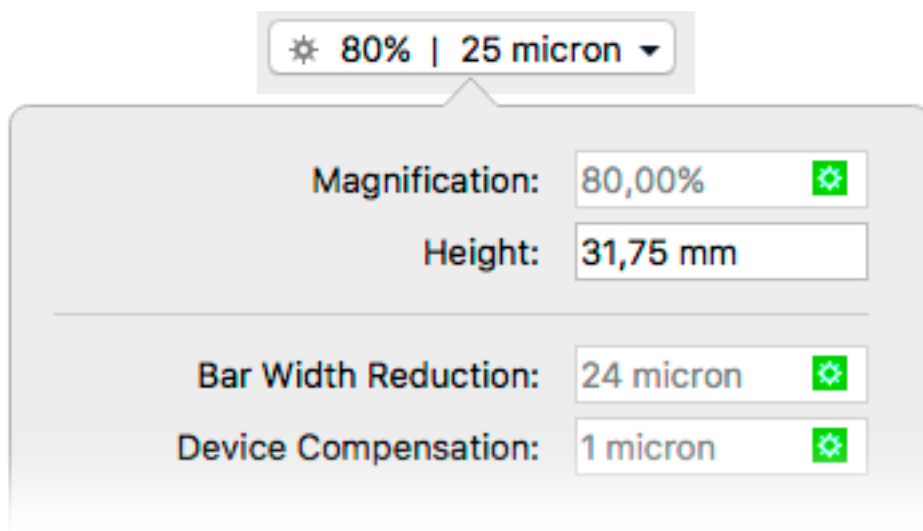
9.1.4. Barcode properties from Automation Engine Job Setup

Using the **Get Properties from Job Setup** button, you can link the parameters for the selected barcode type to the parameters as defined in the Automation Engine Job Setup. This can only work for files that are in an Automation Engine Job.

A type of barcode which has properties specified on the Job Setup will be indicated by a green or red Automation Engine icon in front of the type.


A barcode using the Job Setup properties

If all parameters are according to what is specified in the Job Setup, the Barcode Type inspector will show a green Automation Engine icon  in front of the Type, and the indication "Using Job Setup Properties" is shown at the bottom. Also, every barcode parameter that is defined in the Job Setup is indicated by the same green icon, and these parameters can't be changed. Parameters not defined in the Job Setup can be modified freely in the document.



Mismatched Barcode

A barcode using one or more parameters not matching the parameters defined in the Job

Setup, e.g. if the parameters have been modified in the AE Job Setup, will show a red icon , and the Messages side drawer will show a "Mismatched Barcode" error.

Click the **Get Properties from Job Setup** button to link the barcode type to the parameters of the Job Setup. The icon will become green and all parameters will be changed according to the settings in the Job Setup.

Missing Barcode

If a barcode type is specified on the Job Setup but is not present in the document, a "Missing barcode" error message will appear in the Messages side drawer. If you create a new barcode,

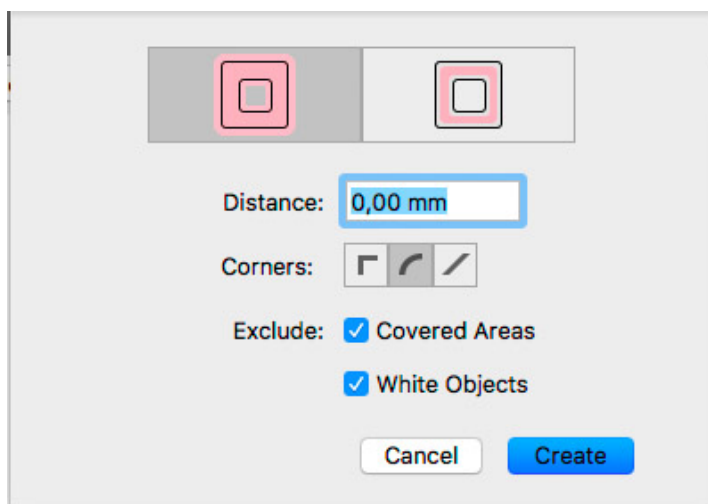
ArtPro+ will automatically create a new barcode of the missing type, using the parameters as defined in the Job Setup.

If multiple barcode types are missing, creating new barcodes will create these missing types in the order as they were entered in Automation Engine Pilot.

Note: Changing the type of an existing barcode to a barcode type with defined parameters will automatically use the Job Setup parameters and get a green icon.

9.2. White Underprint

Using the **White Underprint** function you can add white underprinting objects based on the current selection.



1. Select the objects you want to create white underprint objects for.
2. Choose **Prepress > White Underprint** or use the shortcut **Cmd+Shift+W** (Mac) or **Ctrl+Shift+W** (Windows).
3. Using the buttons, decide if you want the white underprint objects larger (Spread) or smaller (Choke) than the original objects
4. Enter the **Distance** to spread or choke
5. Set the **Corners**: straight, round or beveled
6. Enable **Exclude Covered Areas** if you want to exclude areas in your selection that are covered by unselected objects from the white underprint creation.
7. Enable **Exclude White Objects** if you want to exclude objects with a 0% fill and/or stroke from the white underprint creation.
8. Click **Create** to create the White Underprint objects. If your file already contains White Underprint objects, the button is changed to **Add**. Hold down the Alt key to **Subtract** from the white underprint, in order to create holes in the white underprint.

White Underprint objects are created in a new layer named "White Underprint". In PDF+, this will be a Processing Step layer 'White'.

White Underprint objects will be colored in a separation named "Opaque White". This (normal type) separation is added on top of the Separations list.

Note: Dynamic Marks are ignored when creating White Underprint objects.

9.3. Screening

In ArtPro+ you can set up object based screening. The document will contain a number of "Screen Sets" which are saved in the file. Each of the Screen Sets contains specific ruling, angle, dot shape and DGC information for each defined separation.



You can set up the Screen Sets in the **Screening** window. See [Setting up Screen Sets in the Screening window](#) on page 184

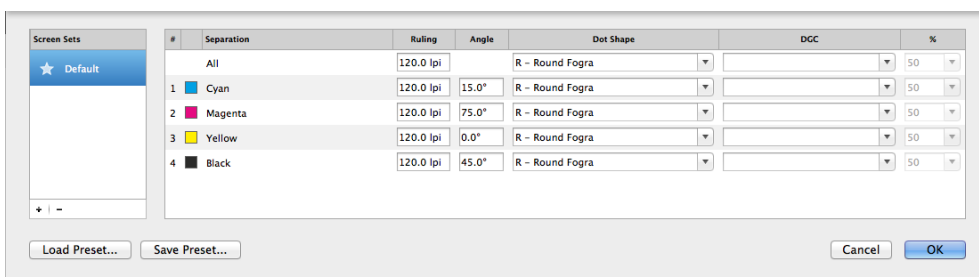
When an object is selected, you can see what Screen Set is applied in the **Screening Inspector**. See [Applying a Screen Set to an object](#) on page 186.

9.3.1. Setting up Screen Sets in the Screening window

In the **Screening** window, you can define a number of **Screen Sets**. Each Screen Set defines the ruling, angle, dot shape and DGC for each of the separations.

1. Open the **Screening** window.

- Click the **Screening** button 
- Choose **Prepress > Screening**
- Use the shortcut **Cmd+ALT+S** (Mac) or **Ctrl+ALT+S** (Windows)
- From within the **Screening Inspector**, click the **Manage Screen Sets** button 



2. In the **Screen Sets** list on the left, click the + button to add a new Screen Set, or the - button to remove the selected Screen Set.

Note: If you create a new screen set, the currently selected screen set will be duplicated. If no screen set is available, a default screen set using a 120lpi ruling and offset angles is created.

3. Double-click the name of a Screen Set to rename it

4. Set the star in front of the Screen Set you want to use as **Default** Screen Set. The default is applied to all unscreened objects when saving Normalized PDF, and to Mask objects when an opacity mask is released.

Note: When opening a Normalized PDF, the most used Screen Set will be the default screen set, unless a default was defined already. When opening an ArtPro file, ArtPro+ will determine the default screen set based on the screen name. If that doesn't work, the first screen set will be used.

5. To edit one Screen Set, select it in the Screen Sets list, and change its settings on the right hand side:
 - a) Set the **Ruling** in lines per inch (lpi). You can enter the ruling in lines per centimeter by adding the unit "lpcm" to the value. It will be converted to lpi.
 - b) Set the **Angle** to be used for each separation.
 - c) Set the **Dot Shape**. The dropdown contains the most common Esko supported dot shapes, but you can manually enter the dot shape name as well. You can easily search a specific dot shape by typing the first letters.
 - d) Set a Dot Gain Curve **DGC** by selecting it from the dropdown, or by entering it manually. In case you select a PressSync curve, you can also define a percentage between 20 and 70%.
 - e) You can set the **Ruling, Dot Shape** and **DGC** for all separations at once by using the **All** row.
6. To save all defined Screen Sets in a Screen Preset, for example to be reused in other documents, click the **Save Preset...** button, and define the name for the Screen Preset.
7. To load the Screen Sets saved in a Screen Preset, click the **Load Presets...** button and select the Screen Preset to load. The Screen Sets in the Preset will be merged with the current Screen Presets: if a Screen Set with the exact same name and settings already exists, the Screen Set will not be created.

Note: Only Esko supported dot shapes are recognized. Other dot shapes will come in as "Standard PDF". In PDF+, if no dot shape is specified, this will also be shown as "Standard PDF" after saving and reopening the file.

Screening from Automation Engine Server

If you are connected to an Automation Engine (so you see the green server status icon in the upper toolbar - see [Preferences](#) on page 34), the **Dot Shape** and **DGC** fields in the Screening dialog show the available values from the server.

If the server gets disconnected, the description of the selected dot shape is removed, but the code itself is retained.

For example "HD01 - HD Flexo C_MCAII MC07P_H - DuPont DFH - Flexible-HV" turns into "HD01" when disconnected from the server.

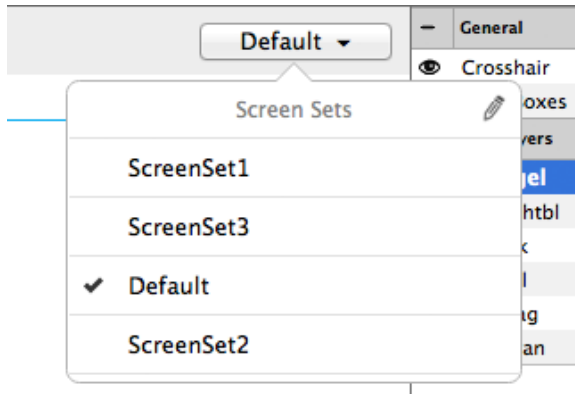
Saved server values of Dot Shape and DGC are kept in the document, even when reopening after disconnecting the server.


When there is no Automation Engine connection, or no Imaging Engine is attached to the Automation Engine, the default Dot Shape and DGC lists are offered.

You can still enter any value manually.

9.3.2. Applying a Screen Set to an object

You can see what Screen Set is applied in the **Screen Set Inspector**



1. Select one or more objects.
2. Click the **Screen Set Inspector** at the right side of the Inspector bar.
The **Screen Set Inspector** will show what Screen Set is currently used, and lists all available Screen Sets.
3. Select a Screen Set to apply it to all selected objects.
4. To edit the Screen Sets, click the **Manage Screen Sets** button . See [Setting up Screen Sets in the Screening window](#) on page 184

Note: If the selected objects use different Screen Sets, the Screen Set Inspector button will show "≠", and all Screen Sets used in the selection will have a checkmark.

9.3.3. Screening when merging separations

When merging separations in ArtPro+ 18 and earlier, the "source" screen settings (i.e. the screen settings for the separation that was merged) are lost, and the screen settings of the "destination" separation are used..

In ArtPro 18.0.1 and later, when merging a separation that creates a screening conflict, you'll get the choice to keep the source screening, or to use the destination screening (the screen settings of the separation you merge into).

A screening conflict occurs when all the following conditions are met:

- screening is applied on objects using the merged separation.
- the source and destination separation have different settings (ruling, angle, ...) within the same screen set.

If you decide to use the destination screening, the settings of the destination separation are used, and the settings of the source separation are lost.

If you decide to keep the source screening, the objects that used the conflicting screen set will have the settings of the source separation, but applied on the destination separation (the merged separation). If there is already a screen set with these exact settings, this screen set will be used, otherwise a new screen set is created.

Example:

Screen Set 1:

- Separation Ink1, ruling 120lpi, angle 75°
- Separation Ink2, ruling 120lpi, angle 75

Screen Set 2:

- Separation Ink1, ruling 120lpi, angle 45°
- Separation Ink2, ruling 120lpi, angle 75°

When merging Ink1 onto Ink2, if all objects using the separation Ink1 use screen set 1, there is no conflict, since the settings for Ink1 and Ink2 are the same.

If there are objects using Screen Set 2, there is a conflict, since the settings for Ink1 and Ink2 are different.

If you choose to use the destination screening, these objects will still use Screen Set 2, and the settings of the destination separation Ink2 is used, i.e. an angle of 75°.

If you choose to keep the destination screening, these objects will use a new screen set, where Ink2 uses the settings of Ink1, i.e. an angle of 45°.

Note: When using the **Recolor** function, you will not get this option. The destination screening is always used. See [Recolor](#) on page 119

9.4. Ink Coverage

Using the **Ink Coverage** menu you can calculate the surface ink coverage for the active job. The total surface of the job and the surface covered by each separation is calculated. The results are displayed in the unit defined in Preferences (see [Preferences](#) on page 34), as well as in percent.

The invisible layers are not taken into account. Area: Trim Box

#	Separation	Ink Coverage	%
1	Cyan	62948.61 mm ²	42.87%
2	Magenta	54086.84 mm ²	36.84%
3	Yellow	89943.94 mm ²	61.26%
4	Black	34578.86 mm ²	23.55%
5	Cut	11.41 mm ²	0.01%
6	Outside Bleed	11.41 mm ²	0.01%
7	gloss spot UV varnish	1021.50 mm ²	0.70%

Close

Ink coverage is only calculated inside the border set using the dropdown, so if the border is set for example to trim box, it does not include any bleed or other elements outside that size.

Note: Invisible layers are excluded from the calculation. However, invisible Separations or non-printing layers are included.

9.5. Trapping

Using the Trapping tool, you can add traps.

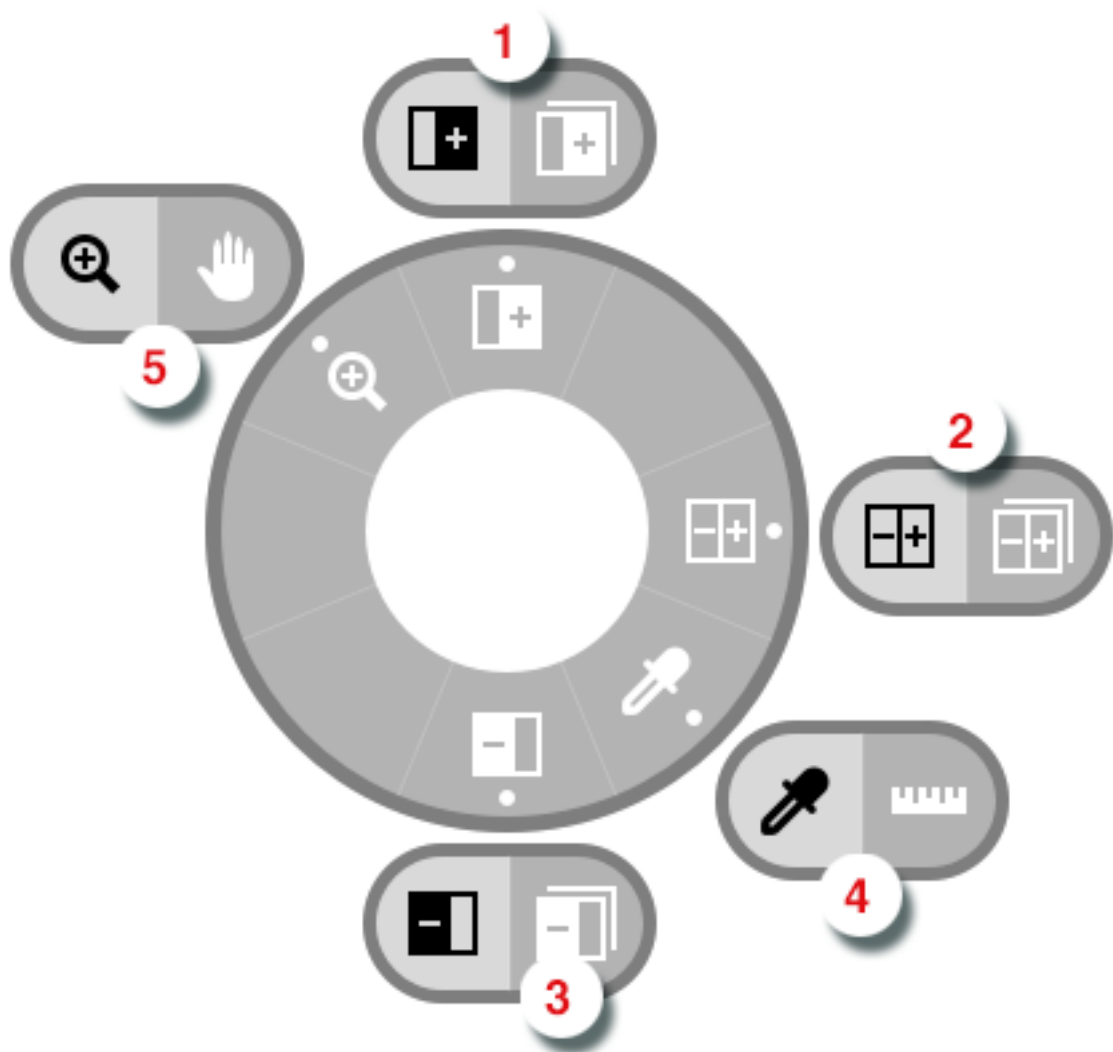
1.



Click the **Trapping** button or use the shortcut **Cmd+T** (Mac) or **Ctrl+T** (Windows) to switch to Trapping mode

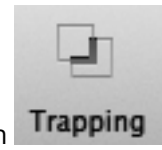
2. If you want ArtPro+ to create Trapping Suggestions, enable **Start with a Trapping Suggestion**. See [Trapping Suggestions](#) on page 190
3. Define the size of **Gaps** you want to automatically close, and click **Enter Trapping Mode**.
 - All layers are grouped in one single layer named "Artwork"
 - Functions not relevant for trapping will not be available. For example Page Boxes are hidden, Separations can be viewed but not edited, other tools except Densities and Dimensions are disabled, Compare in Quality Control is disabled, etc.
 - The Trapping settings are shown at the bottom of the workspace. See [Trapping / Pullback Settings](#) on page 190
 - If Trapping Suggestions is enabled, ArtPro+ will add traps as needed. See [Trapping Suggestions](#) on page 190

4. While in Trapping mode, you have different tools available from the tool selector to create your traps.



1. The **Trap** tool and **Trap Similar** tool, shortcut **T**. When switching to Trapping mode, the Trapping tool will be activated automatically. See [Trapping tool](#) on page 191
2. The **Trap + Pullback** and **Trap + Pullback Similar** tool, shortcut **B**. See [Trap and Pullback tool](#) on page 193
3. The **Pullback** and **Pullback Similar** tool, shortcut **B**. See [Pullback tool](#) on page 192
4. The regular **Densities** and **Dimensions** tool, shortcut **D**. See [Densities](#) on page 60 and [Dimensions](#) on page 59
5. The regular **Zoom** and **Pan** tool, shortcut **Z**. See [Zoom tool](#) on page 51 and [Pan tool](#) on page 52

5.



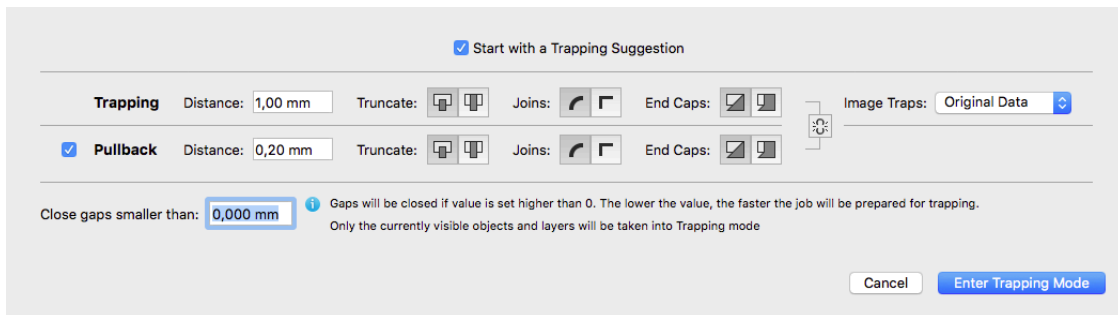
If you are done creating traps, you can click the **Trapping** button again or click the **Leave Trapping Mode** button in the side panel to exit Trapping mode

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

9.5.1. Trapping Suggestions

Before you enter Trapping Mode, you can enable **Start with a Trapping Suggestion**.

Note: Trapping Suggestion is only available in ArtPro+ Advanced.



You can set the Trapping and Pullback Settings for the Trapping Suggestions before entering Trapping Mode. For more information on the Trapping / Pullback settings, see [Trapping / Pullback Settings](#) on page 190

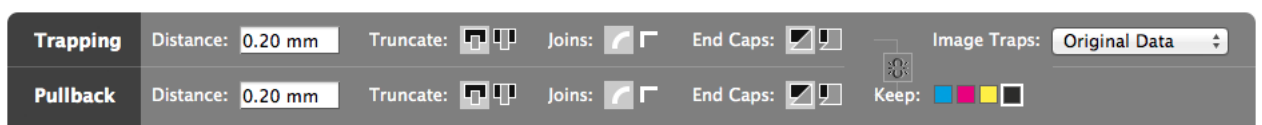
When entering Trapping Mode ArtPro+ will automatically add "suggested" traps on every edge that - according to the application - needs trapping.

You can use the different trap tools to overwrite (e.g. to change the direction, distance or other setting), remove or add any of the suggested traps. See

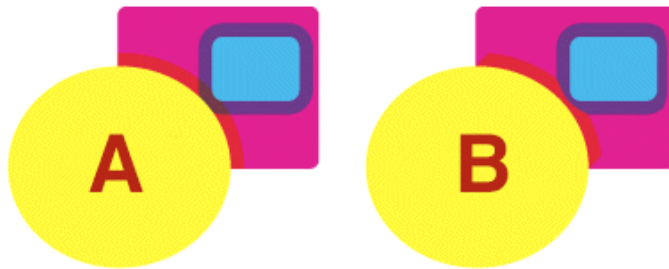
- [Trapping tool](#) on page 191
- [Pullback tool](#) on page 192
- [Trap and Pullback tool](#) on page 193

9.5.2. 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. See [Preferences](#) on page 34.
- **Truncate:** ArtPro+ 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, PowerTrapper Standalone 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 that will be kept (i.e. not pulled back) when applying a pullback. Hold Shift to select multiple colors.
- If the **Link** option is enabled, Trapping and Pullback parameters are kept the same.

9.5.3. 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 object to a neighbouring object to create a trap. If a trap is possible, the arrow you drag will have a solid line. Otherwise, it will be dashed. During dragging, a

black line gives a visual indication of where the trap would end, based on the current trap distance.

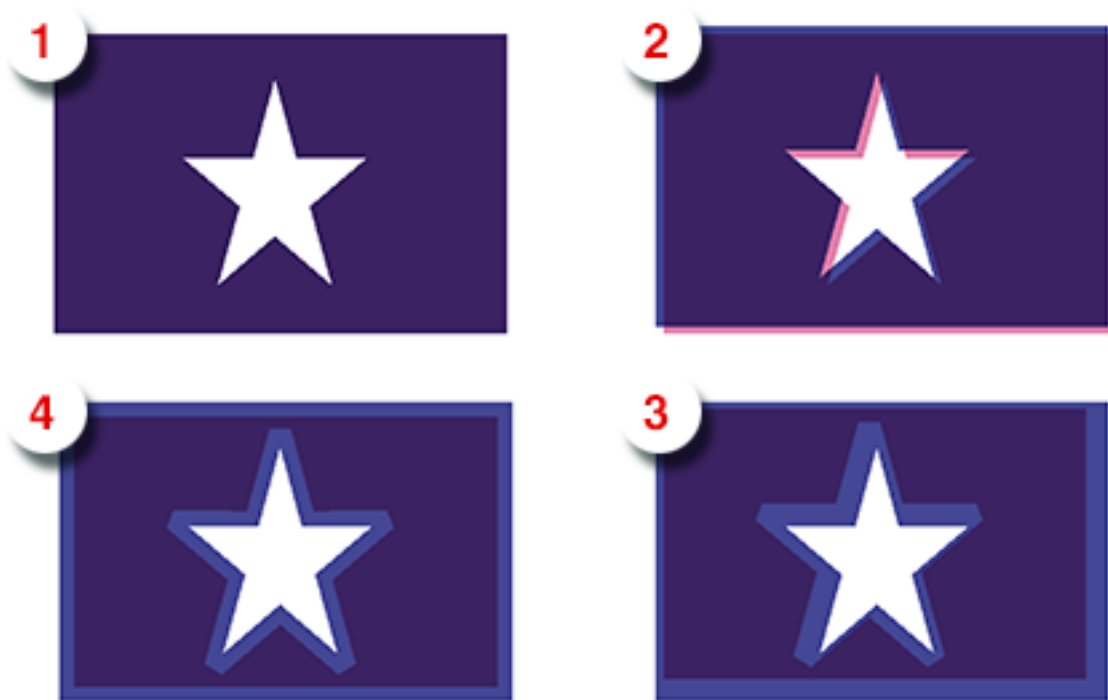
- Click and drag in the opposite direction to change the direction of a trap. You don't need to remove it first.
- After changing the Trapping Settings, you can click and drag over an existing trap again to apply the new settings.
- Hold the ALT key to remove a trap. The cursor will change to a cross.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



9.5.4. 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.

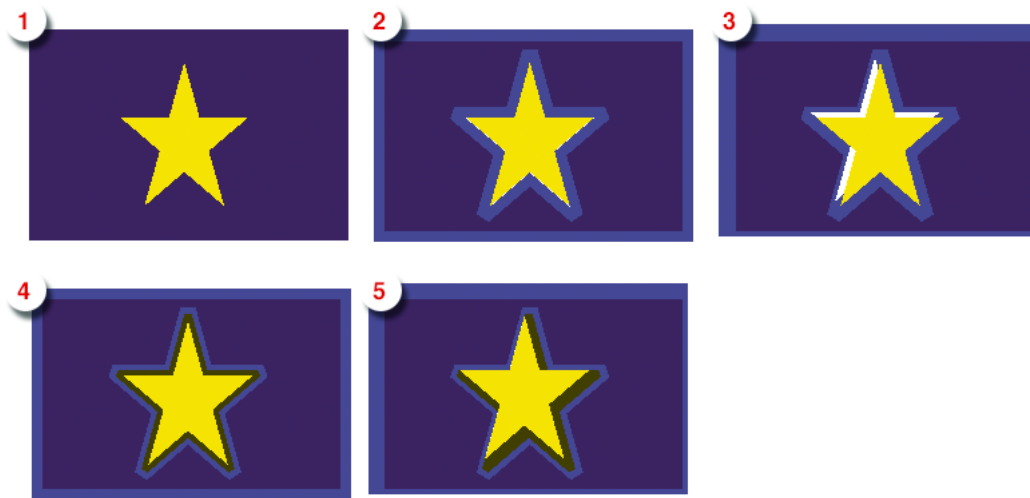
- Set the **Keep** ink (i.e. the ink that is not pulled back) in the Pullback Settings by clicking the ink you want to keep. Shift-click to select more than one ink. You can also press **K** to open a separate Keep Color selector.
- Click and drag from one are to a neighbouring are to create a pullback. If a pullback is possible, the arrow you drag will have a solid line. Otherwise, it will be dashed.
- 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 193

9.5.5. 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.

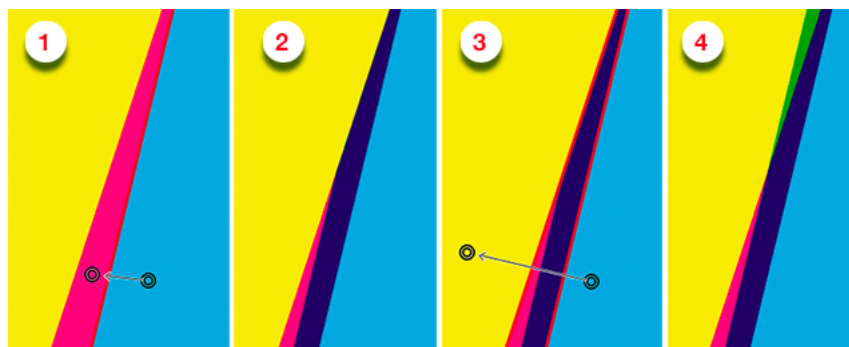
The shortcut **B** will toggle between Pullback and Pullback Similar.

- Click and drag from one are to a neighbouring are to create a trap and pullback. If a trap and pullback is possible, the arrow you drag will have a solid line. Otherwise, it will be dashed.
- 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.

9.5.6. Trap Overshoot

In ArtPro+ you can apply a manual overshoot: a trap that goes over 2 edges, going across a thin area of a different color.

Since it is not possible to drag a trap line across more than one edge (the trap line will be dashed, indicating the trap can not be applied), creating a trap overshoot will be done in different steps.



1. First create the trap between the two adjacent objects.
2. This is the resulting trap, set to clip "on edge"
3. Click and drag the trap line from the first to the third object, indicating the overshoot.
4. The overshoot is calculated, resulting in the cyan being trapped into the yellow and the magenta.

Note: You can only apply overshoot if the trap was added in the same trapping session.

9.6. Preflight

Preflighting a document is checking if the document is ready for output.

To preflight documents, you use Preflight Profiles. A Preflight Profile is a collection of criteria, which a document should meet to be outputworthy. For each criterion, you can specify:

- If it should be checked or not.
- How it should be listed in the Preflight Report, i.e. as a "warning" or "error" if a deviating property is detected in the document.
- If an error or warning can be signed off.

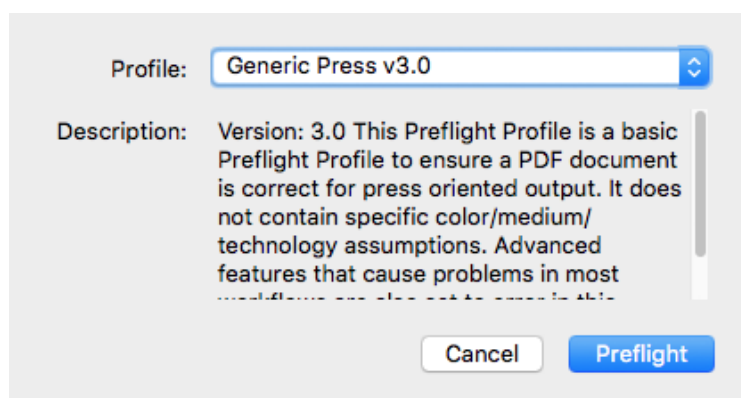
Moreover, some criteria allow you to specify how detected problems, if any, should be fixed.

An example of a criterion is RGB colors. If you do not want RGB colors in your documents, you can check this and have all RGB colors converted to CMYK.

9.6.1. Running a Preflight

You can run a Preflight on any PDF file.

1. Select **Prepress > Preflight**



2. Select the Preflight **Profile** you want to use.


You can use a Standard Preflight Profile, a Local Preflight Profile or (if you have a Server connected) a Server Preflight Profile. For more info on how to manage your Preflight Profiles, see [Manage Preflight Profiles](#) on page 196

Underneath a description of the selected Preflight Profile is shown.

3. Click **Preflight**

When the Preflight is done, the Message drawer opens automatically.

4. You can then use the Message drawer to inspect the Preflight results

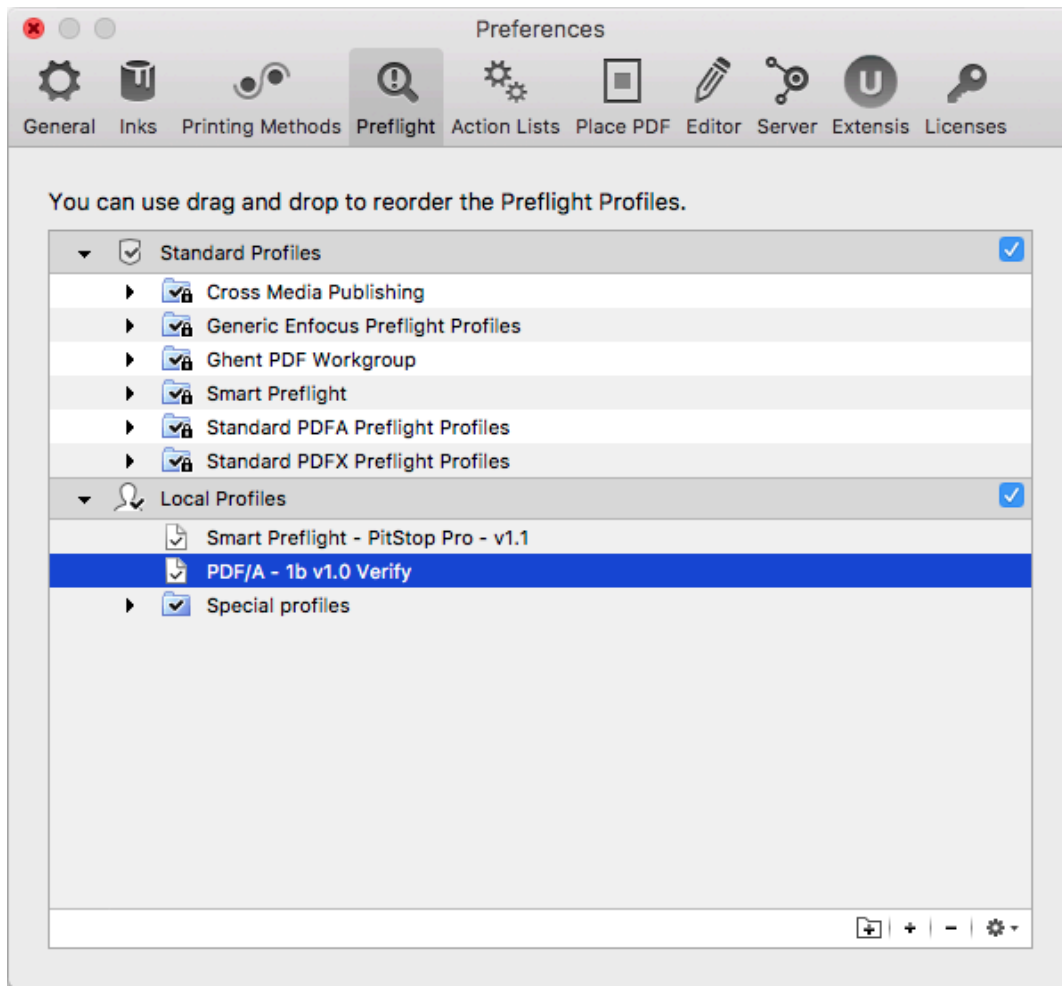
- a) The Message drawer shows all Errors (red), Warnings (orange) and Messages (green) in this order. If the same error was caused by different objects, you can expand or collapse the error list by clicking the triangle in front of it.
- b) Click an entry in the list to select it. The object(s) that caused the selected error will also be selected in your document. If the Preflight message refers to a part of an object (e.g. text in a barcode) you will see an area select.
- c) If the **Zoom to Selection**  option is enabled, clicking an entry displays the selected object(s) as big as possible in the active window.
- d) You can click the triangle in the top bar to see the Preflight Profile that was used to Preflight, along with its description. Click the **Generate Report** button to generate a PDF report of the Preflight. Click **Check Again** to redo the Preflight with the same Preflight Profile.

Restrictions:

- Preflight only runs on the current page of Multipage PDF files
- You can run a Preflight on Normalized PDF files, but this will only perform the checks on the document, not the automatic fixes.

9.6.2. Manage Preflight Profiles

Select **Prepress > Manage Preflight Profiles** to open the Preflight tab of the Preferences. You can also open the Preferences and switch to the Preflight tab then. See [Preferences](#) on page 34



You can have three different sets of Preflight Profiles:

- **Standard Profiles:** a set of default Preflight Profiles that can not be renamed, reordered or removed.
- **Local Profiles.** If you have Enfocus Pitstop Pro installed, then any Preflight Profile saved locally in Enfocus PitStop Pro is also available in the Local Profiles folder in ArtPro+ (and vice versa).
- If you have a Server connection, the Preflight Profiles found on the server and visible in Automation Engine's PitStop Profile Editor, are shown in **Server Profiles**

If you disable a category (using the check box on the right hand side), the Preflight Profiles in it will not be available when selecting a Profile to run a Preflight.

- Double-click a Preflight Profile name or folder to change its name.
- Click and drag to change the order of Preflight Profiles and folders, or to put Preflight Profiles in or out a folder.

When dragging, the default action can be to move (e.g. from one subfolder to another) or to copy (e.g. from Server Profiles to Local Profiles). You can use the standard modifier keys to force copying (Alt key) or moving (Cmd on Mac, Shift on Windows).

- Click the  button or choose **Add Group** from the fly-out menu to add a (sub)folder

- Click the + button or choose **Create Preflight Profile...** from the fly-out menu to create a new Preflight Profile from scratch. The **Preflight Profile Editor** will open. See *The Preflight Profile Editor* on page 198
- Click the - button or choose **Remove** from the fly-out menu to remove the selected folder or Preflight Profile
- Double-click the icon of a Preflight Profile or choose **Edit Preflight Profile...** from the fly-out menu to edit the Preflight Profile in the **Preflight Profile Editor**. See *The Preflight Profile Editor* on page 198
- Select a Preflight Profile and choose **Duplicate** from the fly-out menu to make a new Preflight Profile based on an existing one. It will immediately be opened in the **Preflight Profile Editor**. See *The Preflight Profile Editor* on page 198
- From the fly-out menu, select **Import Preflight Profile** to import a Preflight Profile saved as a .ppp file into the Local Profiles.
- From the fly-out menu, select **Import Group** to import a folder containing .ppp files as a folder in the Local Profiles.
- From the fly-out menu, select **Export** to save the selected Preflight Profile as a .ppp file, or to save the selected folder as a folder containing .ppp files.

Note: You can not rename or reorder Standard Profiles. However, you can export a Standard Profile as a .ppp file and then import it into the Local Profiles.

9.6.3. The Preflight Profile Editor

Using the Preflight Profile Editor, you can create and modify Preflight Profiles

SETUP

In the **General Setup** you can define the Name, Author, Company and Description for the Profile.

In the **Permissions** section you can lock the Preflight Profile with a password.

You can enable or disable **sign-off**.

If you want to use Color Management or Restrictions on your Preflight Profile, you can set this up in the appropriate tabs.

CHECK ON

In the **CHECK ON** categories, you can define what checks need to be performed. Clicking any of the categories will show the checks you can use (e.g. "Color RGB" under "Color"). By double-clicking one of the properties you can add it to your Preflight Profile.

For every check, you can define the severity (Warning or Error) and customize the report message.

For a more elaborate documentation on the creation of Preflight Profiles, we refer to the PitStop Pro documentation, available from <https://www.enfocus.com/en/support>

9.7. Step & Repeat

There are two Step & Repeat methods available in ArtPro+.

- Creating a **Grid**. See [Grid Step & Repeat](#) on page 199
- By opening an .mfg file. See [Step & Repeat based on an MFG file](#) on page 209

9.7.1. Grid Step & Repeat

Note: Step & Repeat is only available in ArtPro+ Advanced.

Using the **Make Grid** function, you can create a Step & Repeat of a placed PDF file.

For more information on working with placed PDF files, see [Working with Placed Art](#) on page 137

1. Select the Placed Art you want to repeat.

Note: If more than one placed PDF is selected, multiple Grids will be created on top of each other.

2. Use the **Make Grid** function
 - Select **Prepress > Step & Repeat > Make Grid**
 - Use the **Make Grid** button in the Placed Art Inspector
 - Use the shortcut **Cmd+Alt-G** (Mac) or **Ctrl+Alt+G** (Windows).

A 2 x 2 repetition of the selected Placed Art is created, using the Trim Box (when available) as step distance. You can modify the Grid using the **Grid Inspector**. See [The Grid Inspector](#) on page 199

When creating a grid from a Placed Art object, by default the Processing Step Cutting layer will be used as **Die Shape**. If no Special Type Cut layer is available, the Trim Box is used instead. You can change the Die Shape in the Placed Art Inspector. See [Placed Art Inspector](#) on page 140

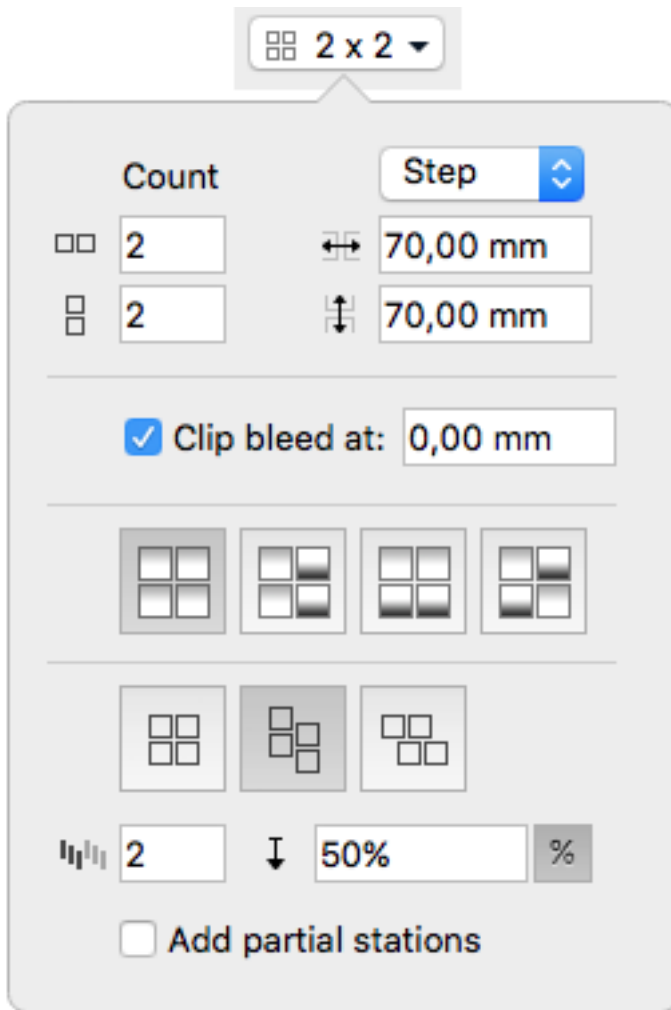
When selecting a Grid, the Placed Art inspector will allow to change the initial **Orientation** of the one-ups in this grid. Their orientation within the layout can be changed further by the option **Head Turn**. See [Placed Art Inspector](#) on page 140







The Grid information is saved in the PDF file, so you can edit all parameters after reopening the file.

Note: Since Step & Repeat is using Placed Art, the same restrictions apply: you can not place a PDF if the current document is a Normalized PDF file.

The Grid Inspector

In the Grid Inspector you can change the selected S&R Grid.



1. You can define the number of horizontal  and vertical  repeats
2. Using the dropdown menu, you can switch between defining the **step** distance horizontal  or vertical , and defining the **gap** distance horizontal  or vertical .
 - Setting the **gap** means defining the distance between the right (or bottom) side of the previous step, and the left (or top) side of the next step. The step distance will be the (vertical or horizontal) size of the one-up, plus the size of the (vertical or horizontal) gap.
 - Setting the **step** means defining the distance between the left (or top) side of the previous step, and the left (or top) side of the next step. When setting the step distance, the size of the one-up is not taken into account.
3. **Clip Bleed** creates a clipping mask around the one-up, to clip any bleed to the desired distance. Read more about bleed in [Working with bleed](#) on page 202
4. Define the Head Turn



. You can choose between

- No Head Turn



- Head Turn on column



- Head Turn on row



- Head Turn on row and column

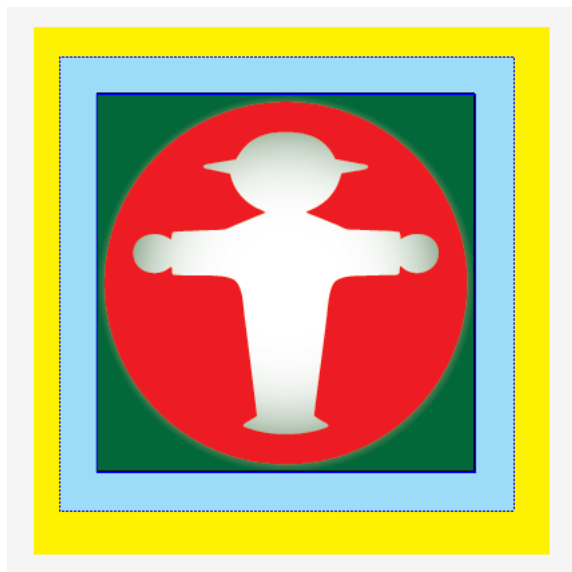


5. In the bottom section you can define the **staggering**. See [Stagger](#) on page 206

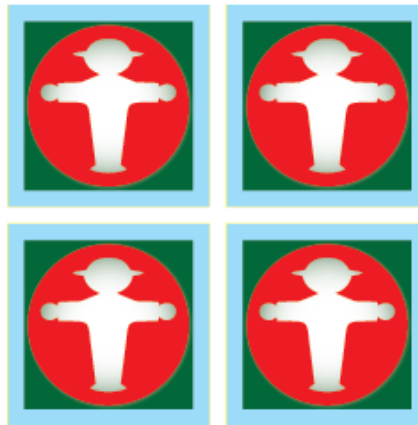
Working with bleed

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

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



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



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



To avoid this, the **Clip bleed at** option can be used. When enabled, a clipping mask is applied around the one-up, based on the defined **Die Shape** (see *Placed Art Inspector* on page 140), using a centerline algorithm. A distance can be entered to offset the clipping mask from the Die Shape, either positive (to the outside) or negative (to the inside). If two one-ups (or their bleed) would overlap (i.e. if the size of the Die Shape + the "Clip Bleed at" distance is larger than the step distance), the clipping mask of both will be restricted to half way the overlap, so the clipping masks don't overlap.

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



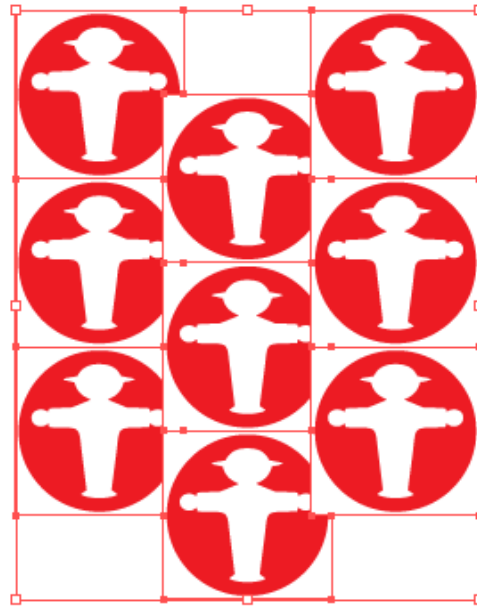
If **Clip Bleed at** is set at a positive value, bleed will become visible on the outside of the Repetition.



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



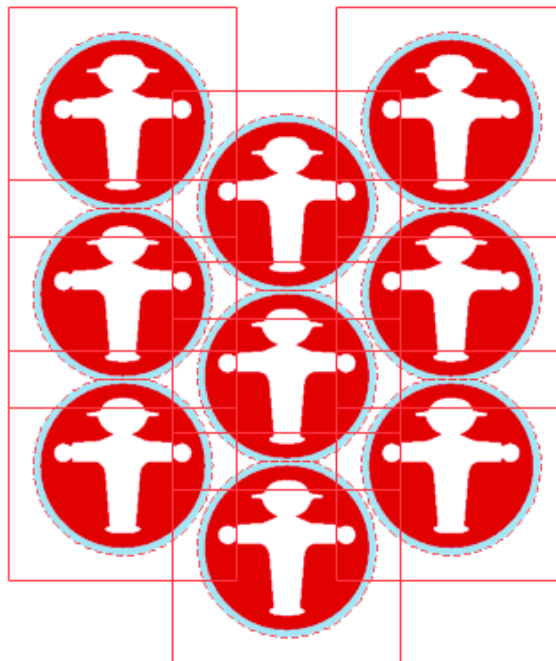
In some cases, using the **Clip Bleed at** option will give undesired results. In the example underneath you see a Repetition with Staggering, using a negative horizontal gap, using the Trim Box as Die Shape. If the **Clip Bleed at** option is enabled, parts of the labels are clipped off.



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

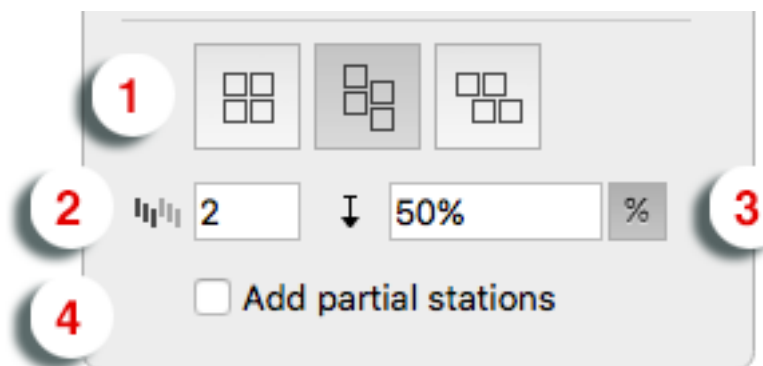


In the example above, it would obviously make more sense to use a circular Die Shape, e.g. based on the Processing Step Cutting layer or on a specific separation. In that case the **Clip Bleed At** is based on the defined Die Shape. This allows to add bleed in between the labels, using the centerline in case bleed might overlap.



Stagger

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



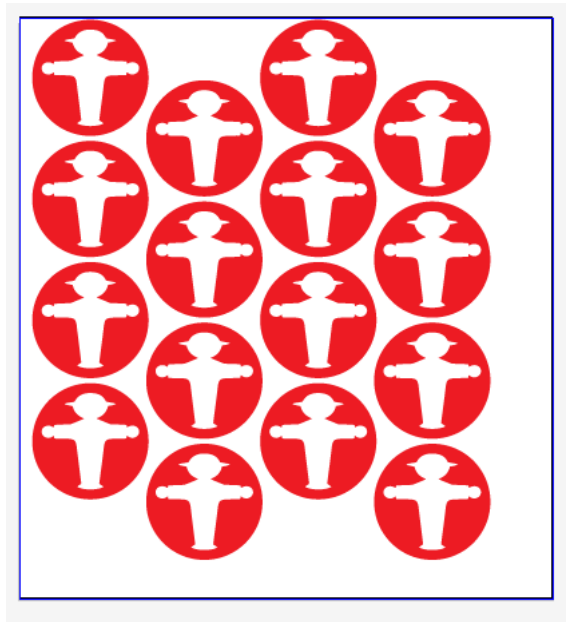
1. Select the **Direction** in which you want to stagger the one-ups. From left to right, the choices are: No Stagger, Stagger Columns, and Stagger Rows.
2. The stagger will be repeated for a number of rows or columns as defined in **Restart after n columns/rows**. After that, the next one-up will be at the begin position again.
3. You can define the distance for staggering. By clicking the button you can switch between entering the distance as a fixed value in the current units, or as a percentage of the one-up size.
4. If **Add partial stations** is enabled, the gaps created by staggering will be filled with partial labels (print items).

Examples:

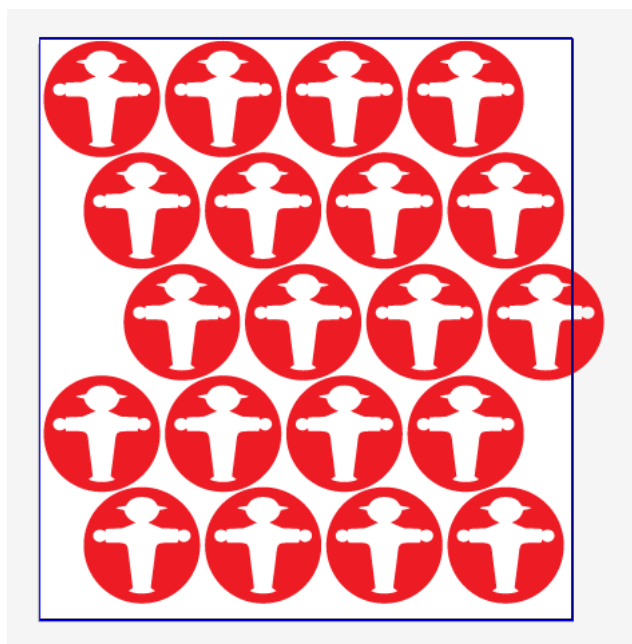
No stagger:



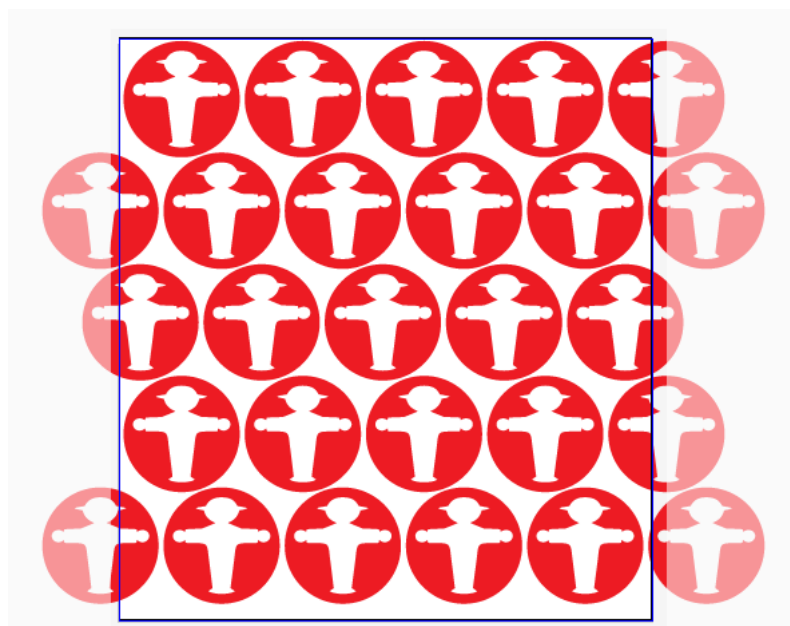
Stagger Vertical, 50% distance, using a negative horizontal gap, Repeat After 2 columns:



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



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



Positioning the Grid

The Transformation Inspector, which you can use to change the position of the Grid, is slightly different when selecting a Grid. See [Transformation Inspector](#) on page 97

The position of a Grid is based on 3 settings:

Attach to

The position of the Grid can be based on

- the Art Box
- the Bleed Box
- the Crop Box
- the Media Box
- the Trim Box
- another S&R Grid

Positioning

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

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



Offset

In the offset fields, you can move the Grid based on the defined position.

9.7.2. Step & Repeat based on an MFG file

Note: Step & Repeat based on an MFG file is only available in ArtPro+ Advanced. You need an ArtPro+ Advanced license to open an MFG file, but also to replace a Structural Design Station, whether it is a Placeholder or Placed Art, or to use the **Adjust Bleed** tools.

An ArtiosCAD MFG file is a Manufacturing structural design file, containing a repetition of Structural Design files (ARD).

If you set the dropdown at the bottom of the File Open dialog to "All supported Structural Design files", you can open an ArtiosCAD MFG (Manufacturing structural design file) in ArtPro+. You can also simply drag and drop the MFG file onto the application or the dock icon.

Note: Unlike ARD files, you can not place an MFG file.

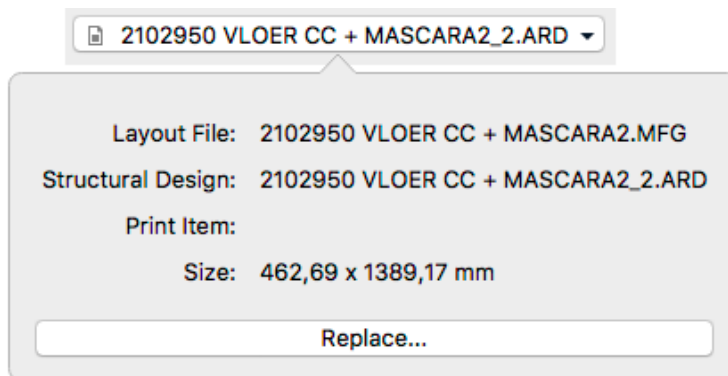
This is the typical workflow with MFG files:

1. Open the MFG file in ArtPro+, either using **File > Open** or by dragging and dropping the MFG file on the application or doc icon.

Note: When using the File Open dialog, you have to set the file selector to **All Supported Structural Design Files** to select an MFG file.

- The Sheet Size and Margin defined in the MFG file will define the Trim Box and Media Box.
 - A layer using the name of the MFG file is created
 - The **Placed Art side drawer** is opened, showing all the placeholders, one for every ARD included in the MFG file.
 - For every Placeholder, its ARD filename, Print Item, dimensions and amount of copies used in the repetition is shown in the Placed Art side drawer. You can also see the index (A, B, ...) which is also shown in the Placeholder in the actual document.
 - Every different placeholder also uses a different temporary Placeholder color (Apricot, Pink, ...)
2. Select the Placeholder you want to replace, either in the Placed Art side drawer or in the actual document.
- If you want to select e.g. all "A" placeholders, the best way to do so is using the Placed Art side drawer. By selecting in the document, you can combine different placeholders.
3. Open the **Placed Art Inspector**

You can see the name of the Layout file (.mfg), the selected Structural Design file (.ard), the Print Item when defined in ArtiosCAD, and the dimensions.



4. Click the **Replace...** button, and browse for the graphics file you want to use for that station.

You can use PDF+ or Normalized PDF files. PDF+ files can be linked or embedded, while Normalized PDF files will always be embedded. See [Linked versus Embedded Placed Art](#) on page 139

If the placed file contains the corresponding Structural Design file (.ard), this will be used to position the graphics. Otherwise, the placed file will be centered based on the Trim Box.

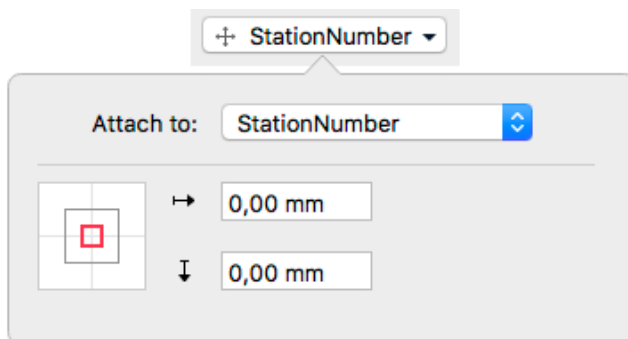
The placed file becomes a regular Placed Art, so you can use the **Placed Art Inspector** to update, replace, ... See [Working with Placed Art](#) on page 137. However, on the document, it remains a Structural Design station in an MFG workflow. You will e.g. still need an ArtPro+ Advanced license to replace Structural Design Stations.

The separations used in the placed graphic will be added to the Separations list. The Placeholder separations will be removed from the Separations list as soon as they're not used anymore.

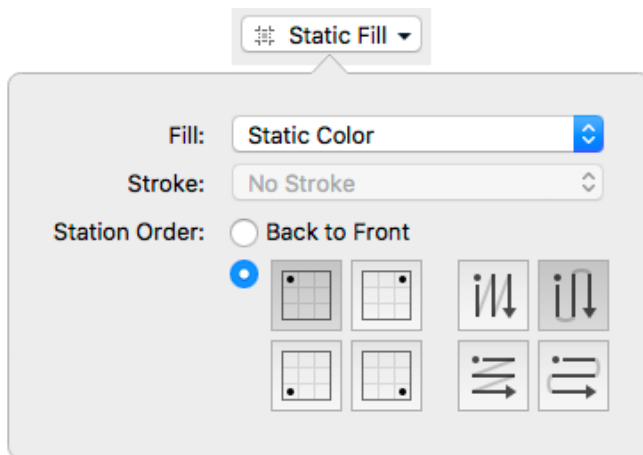
Station Numbering in an MFG workflow

When using an MFG file to create a Step & Repeat (See [Step & Repeat based on an MFG file](#) on page 209) you can use **Station Numbering**

1. Open the graphics file of the one-up.
2. Create or select an object (a rectangle, a path, a text box, ...) and position it where you want to place the station number.
3. Select **Object > Convert to Placeholder**
 You can use the default name "StationNumber" or enter a custom name
4. Click **OK**
 The object loses its fill, stroke, text, .. and is converted to a placeholder object. You can still change the name, position and orientation of the object.
 If needed, you can add more placeholders to the job.
5. Save the file
6. Open the MFG file, and apply the saved graphics file to the corresponding placeholder(s).
 See [Step & Repeat based on an MFG file](#) on page 209
7. In the **Marks** section, click the + sign, and select **Add Station Number Mark**.
 The "StationNumber" placeholder is used to place the Station Number.
8. Open the **Transformation Inspector** to attach the station number to a different placeholder, or to apply an offset.



9. Open the **Mark Inspector** to change the color of the Station Number, and change the start and direction.



- When selecting **Back to Front**, the sequence set in ArtiosCAD and stored in the MFG file will be used
- If you set the order manually, you can use the buttons on the left to define the starting point, and the buttons on the right to define the direction.

Note: You can add Station Numbers to an MFG file that only contains placeholders. In that case, the station numbers will only become visible once the placeholders are replaced by graphics.

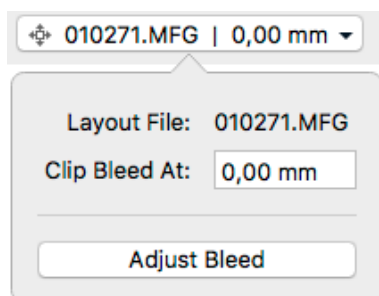
Bleed in an MFG workflow

When opening a .mfg file, the bleed mask is automatically generated from the die shape.

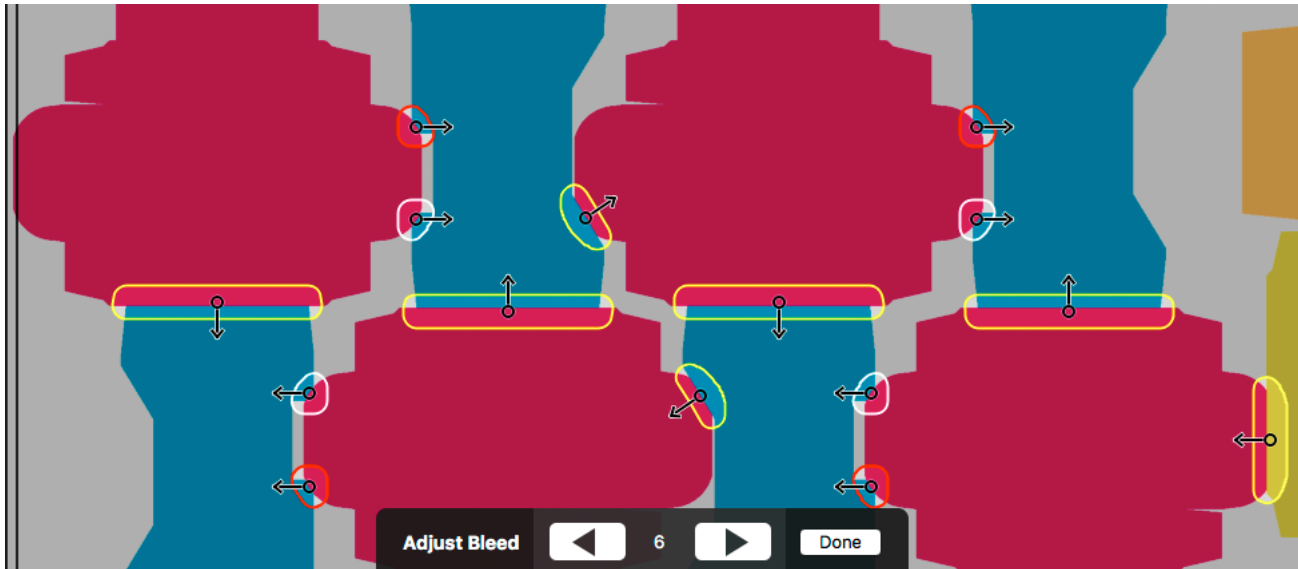
Where panels touch, an overlap decision is made, based on a number of criteria:

- the **Allow bleed** flag of a panel, set in the MFG file. For more info on this setting, see the ArtiosCAD documentation
- the size of the touching panels. The largest panel will bleed into the smaller one.

Using the **Layout Inspector**, you can change the bleed for your MFG file.



1. The **Layout File** shows the name of the MFG file used.
2. Set the **Clip Bleed At** value. This is the amount of bleed added to the outside of the bleed mask that was generated from the die shape.
3. To check and/or change the overlap decisions, select the Adjust Bleed tool by clicking the **Adjust Bleed** button.

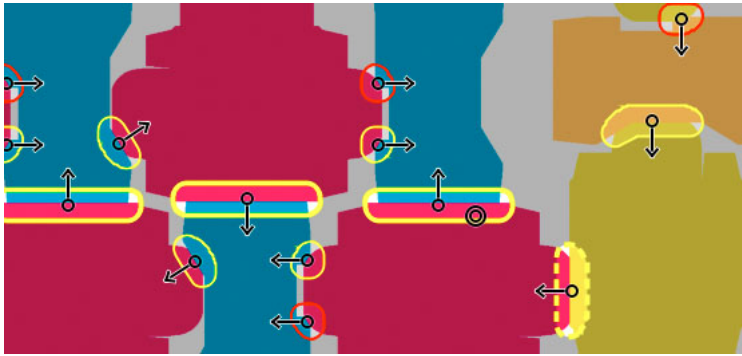


When the tool is active, all areas where flaps overlap the given bleed distance will be marked on the document, indicated in white, yellow or red.

- **White:** This is a decision that is assumed to be correct, e.g. if the direction comes directly from the MFG Allow Bleed flag, without any conflicts, or the user made the decision, without causing any conflicts.
 - **Yellow:** This is a decision that is likely OK, but there might be doubt, e.g. because the 2 affected panels have similar sizes.
 - **Red:** This is a decision that needs to be checked with care, because there is reason to doubt it is correct, e.g. the criteria used to determine the direction are inconclusive, or cause conflicts in other areas involving any of the affected panels.
4. In the **Tool Options** at the bottom of the screen you can check the total number of unique bleed areas. Navigate through these decisions using the Next and Previous buttons or the left and right Arrow keys. The corresponding bleed area will be highlighted.



5. Hover over a bleed area to highlight all the repetitions of the bleed area. This way you know where your bleed decision is repeated.



Other affected bleed areas are shown using a dashed line. See below.

6. Change the bleed direction of the highlighted bleed area by **dragging** from within the bleed area towards the panel that needs to receive bleed, or clicking inside the bleed area to apply **centerlining** on both panels.

By dragging from panel A to panel B you are actually making 2 bleed decisions. It means panel B is set to allow bleed, and panel A is set to trim (bleed onto panel B).

That means that any other bleed area where panel A or panel B is involved, may be affected as well: if you change a bleed direction in a way that sets panel B to allow bleed, the bleed decision for other bleed areas where panel B is involved, will also be revised and set panel B to allow bleed. These areas are indicated by a dashed line when hovering.

7. Switch to any other tool or click the **Done** button to exit the **Adjust Bleed** tool.

Note: Adjusting the bleed decisions after saving and reopening the file is not supported in ArtPro+ 18.

9.8. Marks

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

Important: You can only create and apply marks in a PDF+ file. Marks are not supported in Normalized PDF files.

The marks in your document are shown in the **Marks** section of the Side Panel.

Marks	
Name	Type
Bearer Bar 1	
Text Mark 1	
Custom Mark 1	
Cut Mark 1	
Repeating Mark 1	

The Marks list shows all marks in your document. The **Type** icon indicates what type of mark it is: a custom mark, a text mark, a Bearer Bar, a cut mark, a Repeating Mark or a grid mark.

- Click the Selection icon in front of a mark name to select the mark in your document, e.g. to change its color or position. See [Mark properties](#)
- Double-click a mark to change its name
- Click the **Load/Save Mark Set** button to save or load a Mark Set. See [Working with Mark Sets](#) on page 227
- Click the **Create Mark from current selection** button to create a mark based on the current selection. See [Create a custom mark](#) on page 215
- Click the + button to create a **Standard Mark**. See [Create a Standard Mark](#) on page 216
- Select a mark in the list and click the - button to delete the mark.
- Select **Delete all Marks** from the fly-out menu to remove all marks in the document.
- Marks can be **expanded** into 'normal' objects. See [Expand](#) on page 108

Important: It is strongly advised to only expand ALL Marks at the same time. Expanding one or more marks separately might give unexpected results.

9.8.1. Create a custom mark

You can create a mark based on the selected object(s)

1. Select the object(s) you want to convert into a mark
2. Click the **Make Mark** button and choose the type of mark you want to create.
 - **Create Custom/Text Mark from Selection:** in case you only had a text element selected, the mark will be a Text Mark. In all other cases, it will be a Custom Mark.
 - **Create Grid Mark from Selection** to create a Grid Mark. See [Grid Marks](#) on page 220. This option is only available if the document contains a Grid. See [Grid Step & Repeat](#) on page 199
 - **Create Repeating Mark for Selection** creates a Repeating Mark using the selected objects. See [Repeating Marks](#) on page 223
 - **Create Cut Mark from Selection** creates a Cut Mark using the selected objects. See [Cut Marks](#) on page 224

- **Create Bearer Bar from Selection** creates a Bearer Bar using the selected objects. See [Bearer Bars](#) on page 225

The selected objects will be put in one single group, and become a Dynamic Mark. The properties of the newly created mark will be based on the objects used to create it.

9.8.2. Create a Standard Mark

By clicking the + button in the Marks section, you can create a **Standard Mark**. A Standard Mark is a grid mark, cut mark, bearer bar, or Station Numbering mark using predefined shapes.

Click the + button and choose the type of mark you want to create.

- **Add Grid Mark** creates a standard Grid Mark. See [Grid Marks](#) on page 220. This option is only available if the document contains a Grid. See [Grid Step & Repeat](#) on page 199
- **Add Cut Mark** creates a standard Cut Mark. See [Cut Marks](#) on page 224
- **Add Bearer Bar** creates a standard Bearer Bar. See [Bearer Bars](#) on page 225
- **Add Station Numbering Mark** creates a Station Numbering Mark. See [Station Numbering mark](#) on page 226. This option is only available if the document contains a Grid. See [Grid Step & Repeat](#) on page 199

9.8.3. Mark Types and their properties

The properties of a selected Mark can be set in different places:

- The **Mark Inspector** will contain specific settings for Marks, e.g. to define the color(s) of the mark.
- The **Transformation Inspector** allows to change the positioning and repeat of the Mark.
- For a Text Mark, the **Mark Text Content Inspector** can be used to change the text in the Mark. See [Text Mark](#) on page 218

All of these settings depend on the type of the selected mark.

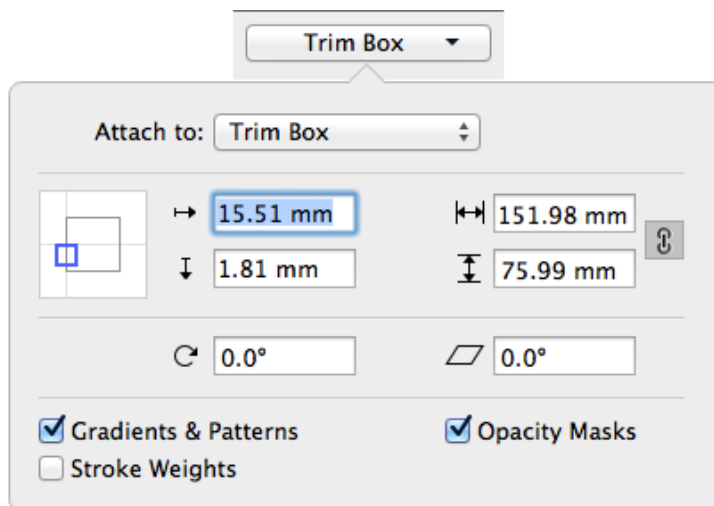
Custom Mark

A **Custom Mark** can be any shape or object you select and convert into a Mark.

- By default the color of a Custom Mark will be **Dynamic** when created, but in the **Mark Inspector** you can select **Dynamic**, **Static** or **Darkest Color**, both for the Fill as for the Stroke. See [Colors and Separations in a mark](#) on page 226.
- Using the **Edit** button, you can also edit the shape of the mark. See [Editing a Mark](#) on page 227
- In the **Transformation Inspector** you can set the positioning of the Custom Mark. See [Mark positioning](#) on page 216

Mark positioning

The position of a Custom Mark is set in the Transformation Inspector.



It is based on 3 settings:

Attach to

The position of the Mark can be based on

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

Positioning

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

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



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

Offset

In the offset fields, you can move the mark based on the defined position. A positive value for offset moves the mark to the right / bottom, as indicated by the arrows.

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

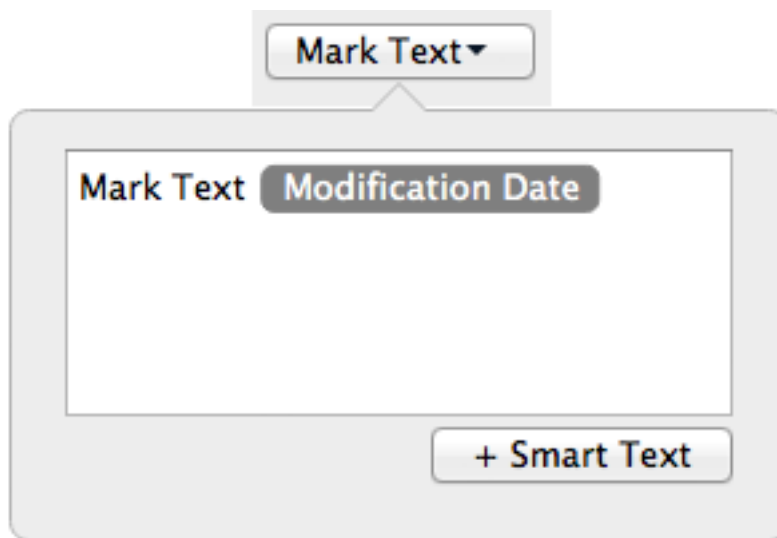
Text Mark

When creating a Custom Mark while you only have a text element selected, the mark will be a **Text Mark**

- By default the color of a Text Mark will be **Dynamic** when created, but in the **Mark Inspector** you can select **Dynamic**, **Static** or **Darkest Color**, both for the Fill as for the Stroke. See [Colors and Separations in a mark](#) on page 226.
- In the **Transformation Inspector** you can set the positioning of the Text Mark. See [Mark positioning](#) on page 216

The complete text mark will have the same formatting, based on the formatting of the first character. Use the **Text Inspector** to change the properties.

The text in a text mark can't be changed using the Text Tool. Instead, it can be set in the **Mark Text Content Inspector**.



You can modify the (static) text, and you can add dynamic text or **Smart Text**

1. Place your cursor where you want the variable to be, or select the text to replace with a variable, and click the **+ Smart Text** button.
2. In the **Insert Field** dialog that opens, choose the fields to insert:
 - a) Select **Local Variables** to select variables from the local file, or **Server Variables** to use SmartNames from the Automation Engine server. In that case, all Database queries defined on the server will be available, as well as all job and product parameters.
 - b) Choose a field **Category**, for example **Barcodes, Date & Time...**
 - c) In that **Category**, choose the **Field** you want to use.
 - d) If applicable, choose the **Format** to use for your chosen **Field** (see [Formatting Dynamic Fields](#) on page 219 for details),

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

- e) When your field is completely set up, click **OK**.

The dynamic parts of a text object will appear as a gray block with white text.

Formatting Dynamic Fields

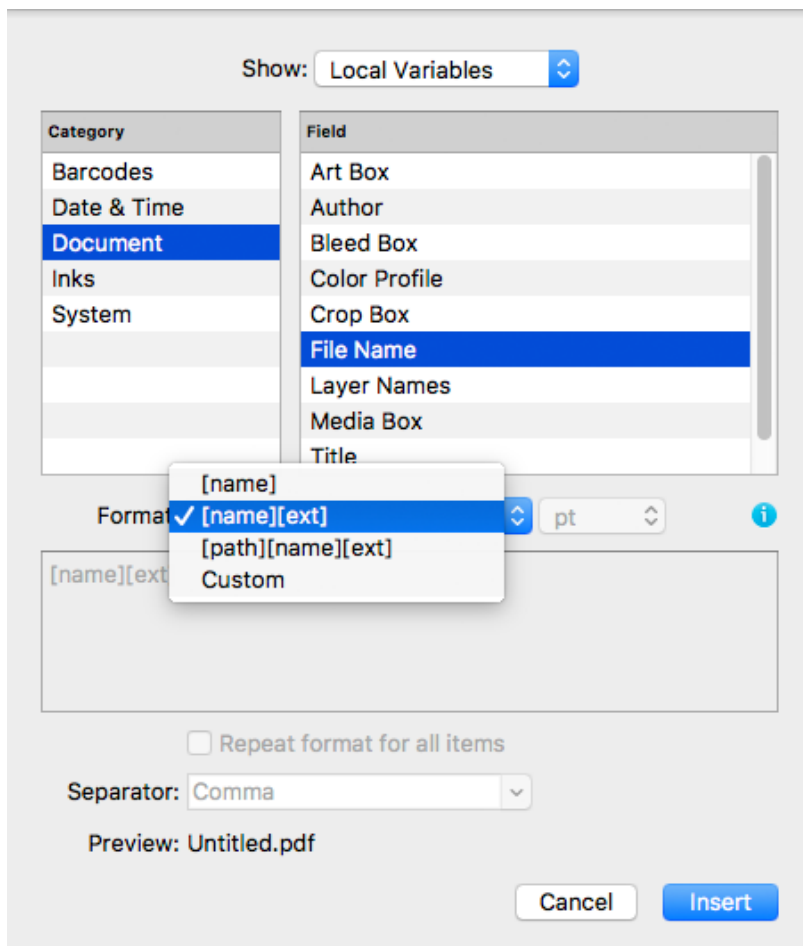
You can format certain fields so they look a certain way (for example, have the date in European or American format).


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

Using an Existing Format

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

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



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

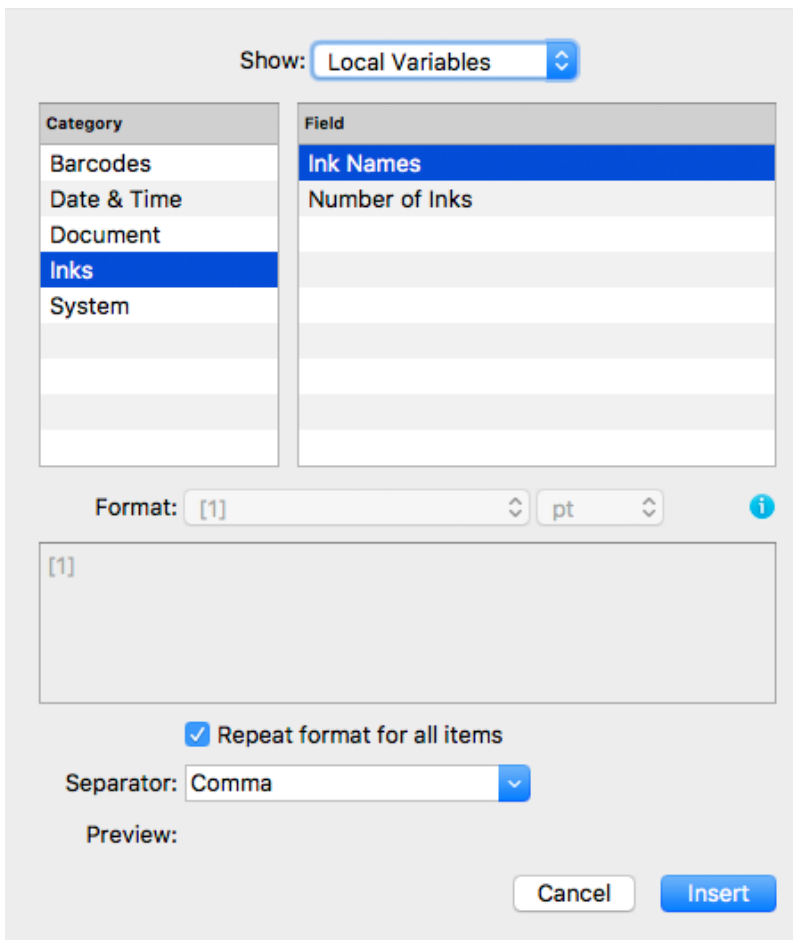
Repeating the Format for All Items

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

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

After choosing an existing format or defining a custom one:

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



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

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

Grid Marks

A Grid Mark is a type of Dynamic Mark that positions itself relative to the stations of your step & repeat or Grid.

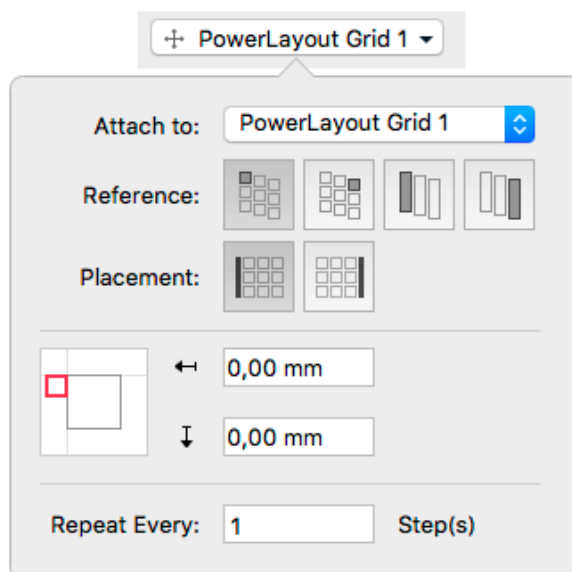
You can create a Grid Mark using your selection (see [Create a custom mark](#) on page 215) or you can create a Standard Grid Mark, which is a rectangle of 5 x 5mm, in Darkest Color, positioned on the left side of the grid, repeated for every station.

You can also load the default "Standard 5x5mm Grid Mark" mark set. See [Working with Mark Sets](#) on page 227. In that case, two grid marks will be created using a rectangle of 5 x 5mm, in Darkest Color, one positioned on the left and one on the right side of the grid.

- By default the color of a Grid Mark will be **Darkest Color** when created, but in the **Mark Inspector** you can select **Static** or **Darkest Color**, both for the Fill as for the Stroke. See [Colors and Separations in a mark](#) on page 226.
- Using the **Edit** button, you can also edit the shape of the mark. See [Editing a Mark](#) on page 227
- In the **Transformation Inspector** you can set the positioning and Repeat settings of the Grid Mark. See [Grid Mark properties](#) on page 221

Grid Mark properties

If you have a Grid Mark selected, the Transformation Inspector will contain some specific properties.



Attach To: upon creation, Grid Marks will be automatically attached to the currently selected grid.

For the Mark Position, you can (besides the normal Position settings - see [Mark positioning](#) on page 216) set the **Reference**. The Reference defines what cell or column to use as a reference. You can set the Reference to **Left Cell** or **Right Cell**, or to **Left Column** or **Right Column**.

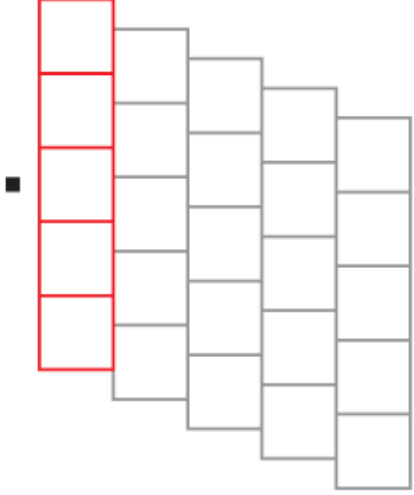
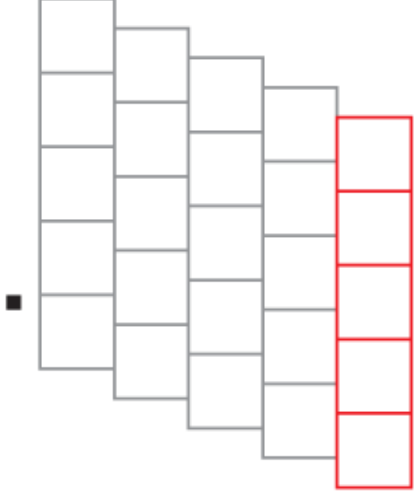
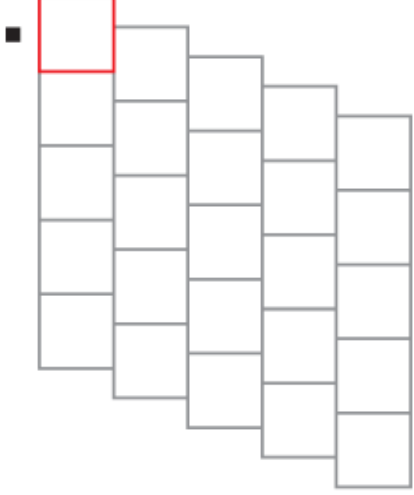
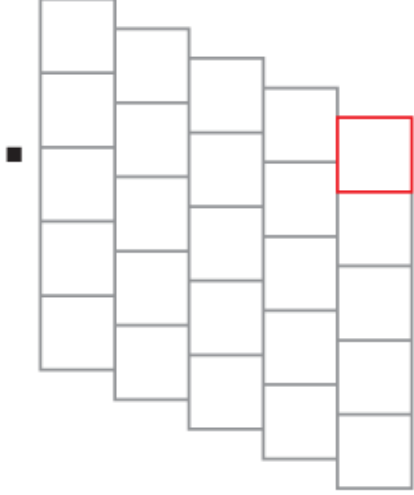
If a **Column** is used, a single Grid Mark is placed, using the column as reference.

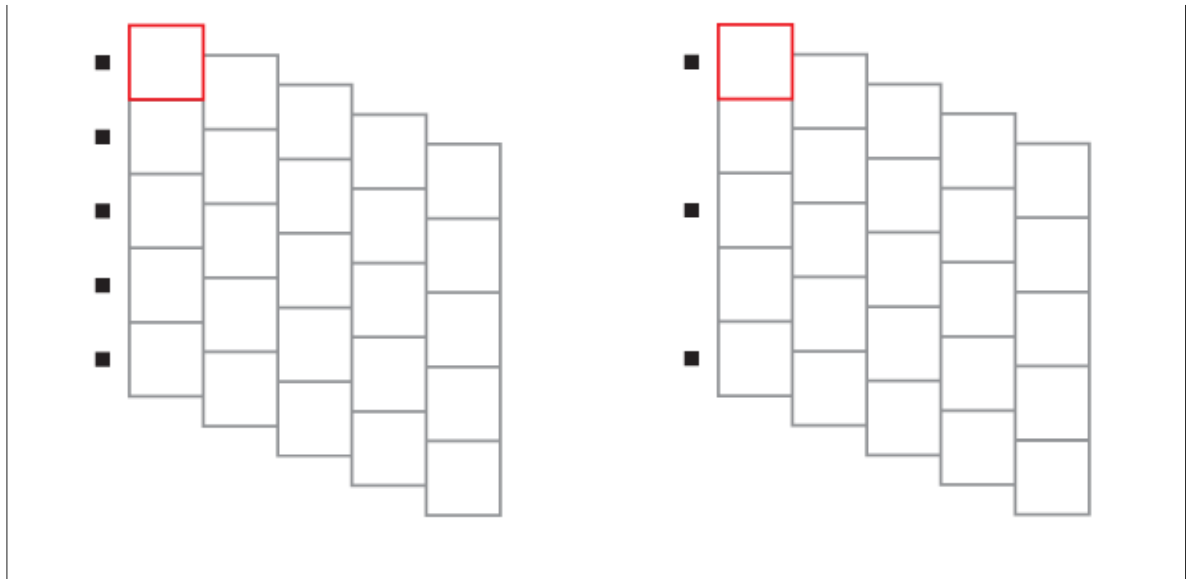
In case you use a **Cell** as Reference, you can choose to **Repeat** the grid mark every Row, every 2 rows, ect...

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

- on the left side of the Repeat
- on the right side of the Repeat

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

<p>Outer Left Column:</p> 	<p>Outer Right Column:</p> 
<p>Outer Left Cell, no repeat:</p> 	<p>Outer Right Cell, no repeat:</p> 
<p>Outer Left Cell, repeat every 1 rows:</p>	<p>Outer Left Cell, repeat every 2 rows:</p>



Repeating Marks

A Repeating Mark is a type of Dynamic Mark that is repeated a number of times, based on the inks used in the document.

You can create a Repeating Mark using your selection (see [Create a custom mark](#) on page 215) or you can load one of the default Repeating Mark sets. See [Working with Mark Sets](#) on page 227. In that case, a Repeating Mark will be created using rectangles of 5 x 5mm

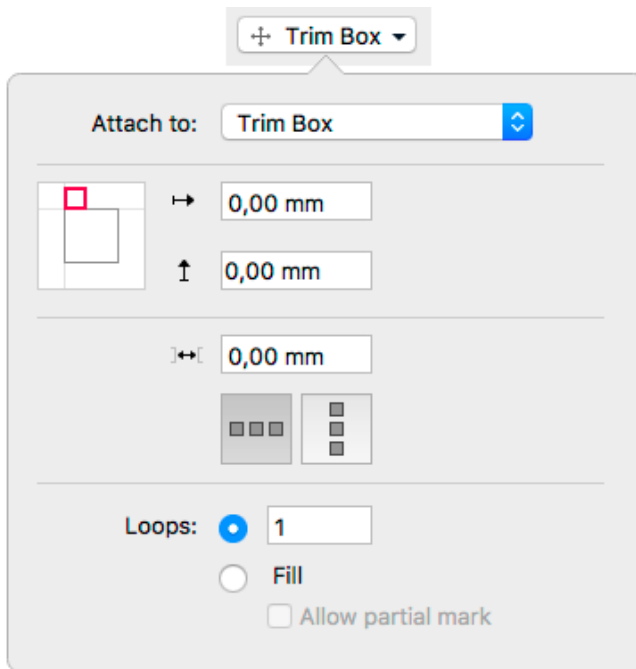
- **Standard 5x5 Repeating Mark:** 1 rectangle for every separation in the document, placed horizontally on the top left corner of the Trim Box.
- **Standard 5x5 Repeating Mark - 4 steps:** 4 rectangles per separation (25%, 50%, 75% and 100%), placed horizontally on the top left corner of the Trim Box.
- **Standard 5x5 Repeating Mark - 10 steps:** 10 rectangles per separation (10%, 20%, 30%, ...), placed vertically next to the top right corner of the Trim Box.
- By default the Repeating Mark will create one mark for every separation. In the **Mark Inspector** you can choose what separations to include:
 - All Separations
 - Artwork Separations
 - Artwork Separations and Varnish
 - Processing Step Colorants (See [Processing Step Layers](#) on page 70)

Using the **Reverse Order** option, you can reverse the order in which the separations are used in the marks

- Using the **Edit** button, you can also edit the shape of the mark. See [Editing a Mark](#) on page 227
- In the **Transformation Inspector** you can set the positioning and Repeat settings of the Grid Mark. See [Repeating Mark properties](#) on page 223

Repeating Mark properties

If you have a Repeating Mark selected, the Transformation Inspector will contain some specific properties.



For Repeating marks, you can use the normal Position settings in the top section - see [Mark positioning](#) on page 216

Note: Changing the position will automatically change the **Direction** (vertical or horizontal) based on the selected position. You can however change the direction manually (see below).

In the second part, you can define the **Gap** in between every mark step, and you can set the Repeating Mark to **Vertical** or **Horizontal**.

If **Loops** is set, the sequence of marks for every separation can be repeated a number of times.

If you select **Fill**, the sequence is repeated as many times as possible within the width (for horizontal) or height (for vertical) of the page box the mark is attached to. Only complete sequences are placed, except when you enable **Allow partial mark**: in that case the complete width (or height) is filled, clipping the sequence at the border of the page box.

Cut Marks

A Cut Mark is a type of Dynamic Mark, in most cases a line, that is positioned twice (once vertical, once horizontal) on every corner of the selected page box.

A Cut Mark (also known as corner mark or trim mark) is used to align the cutter on printed sheets.

You can create a Cut Mark using your selection (see [Create a custom mark](#) on page 215) or you can create a Standard Cut Mark, which is a line of 10mm, with a stroke of 0.1mm, in Registration Color.

- By default the color of a Cut Mark will be **Registration Color** when created, but in the **Mark Inspector** you can select **Static**, **Dynamic** or **Darkest Color**. See [Colors and Separations in a mark](#) on page 226.

- Using the **Edit** button, you can edit the shape of the mark. In case color is set to Static, you can also edit the color of the mark. See [Editing a Mark](#) on page 227
- In the **Transformation Inspector**, using the **Attach to** dropdown you can define the page box or grid on which you want to apply the cut marks, and the **Offset**.

Bearer Bars

A Bearer Bar Mark is a type of Dynamic Mark, in most cases a line, that is positioned on the left or right of the selected page box, grid or grid column, and stretches over the complete height.

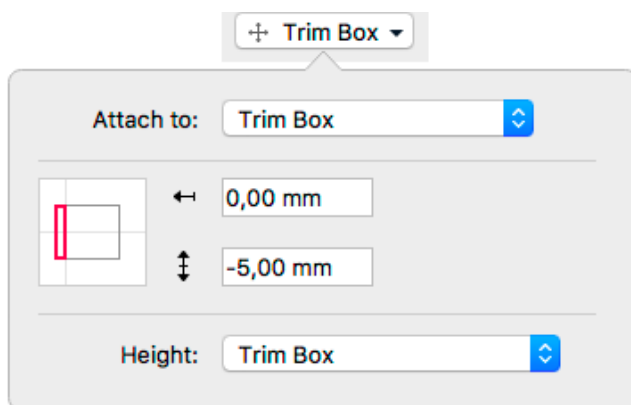
Bearer Bars are added in flexography as support, to limit cylinder bouncing during print.

You can create a Bearer Bar Mark using your selection (see [Create a custom mark](#) on page 215) or you can create a Standard Bearer Bar Mark, which is a rectangle of 5mm wide, on the left side of the Trim Box, stretched over the height of the page box.

- By default the color of a Bearer Bar will be colored in 100% of all artwork separations. You can choose to change this to a custom color, based on printing methods.
- Using the **Edit** button, you can also edit the shape of the mark. See [Editing a Mark](#) on page 227
- In the **Transformation Inspector**, you can set the positioning and height settings of the Bearer Bar. See [Bearer Bar Mark Properties](#) on page 225

Bearer Bar Mark Properties

If you have a Bearer Bar Mark selected, the Transformation Inspector will contain some specific properties.



Attach To: upon creation, Bearer Bar Marks will be automatically attached to the Trim Box, but you can attach the Bearer Bar to any page box or Grid.

You can place the Bearer Bar on the left side, or on the right side.

Using the **Offset** field, you can define the offset between the page box or grid, and the Bearer Bar.

The **Height** can be defined by the height of the Trim Box, the leftmost or rightmost Grid, or the leftmost or rightmost Grid Column. Grid Column can be useful in case of Staggered grid, since the columns can have a different height and vertical position. See [Stagger](#) on page 206

The height can be adjusted by entering a value in the **Bearer Bar Extend** field: a positive value will be added to the height (top and bottom), a negative value will make the Bearer Bar smaller in the same way.

Station Numbering mark

9.8.4. Colors and Separations in a mark

Important:

To make sure your marks are visible when they are being created, it is advised to create custom marks while there are no unused inks in the document.

Keep in mind that a separation that is only used in the object you turn into a mark will also become unused by doing so. It is advised to avoid this by making sure the separations are also used in a another 'normal' object besides the object you turn into a mark.

For predictable results of the colors of a mark, it is advised to use solid colors, and no gradients, images or patterns.

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

- **Static:** If color is set to Static, the original color of the object that is used to create a mark from is stored, based on the actual inks. The color of the mark will not change if the order of the ink list is changed.

After creating the mark, you can change the Static color using the **Edit** button. See [Editing a Mark](#) on page 227

Note:

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

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

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

The **Separations** button will open a window in which you can decide what separations to use and what separations to exclude from being used in your mark.

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

Changing the inks in the document can change the color of the mark. Only printing inks are considered for Darkest Color.

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

9.8.5. Working with Mark Sets

By clicking the **Mark Set** button , the Mark Sets dialog will open, in which you can load, save, delete, .. Mark Sets.

Note: If you want to reuse a Mark Set in another document, it is not sufficient to save the ArtPro+ file: you need to save it as a Mark Set as described below.

- If you have an Automation Engine connection set up, the list of Mark Sets will show all compatible Mark Sets saved on the server. If not, it will list the locally saved Mark Sets. See [Automation Engine connection](#) on page 45
- Click the **+** button to save the current set of marks as a new Mark Set. Enter the name of an existing Mark Set to overwrite it
- Select a Mark Set in the list, and click the **-** button to remove it.
- Select a Mark Set in the list, and click **Replace** to remove all marks in your document, and add the marks defined in the Mark Set. See
- Select a Mark Set in the list, and click **Add** to add the marks defined in the Mark Set.
- Use the **Search** field to filter the list of Mark Sets.

Tip:

To change a Mark Set, it is better to do this on the saved Marks file than on the document where you applied the Mark sets.

Local Mark Sets are saved in C:\ProgramData\Esko\DynamicMarks (Windows) or /Users/Shared/Esko/DynamicMarks (Mac OS).

Mark Sets on Automation Engine are saved in \\servername\Esko\bg_data_marks_v010\DynamicMarks

9.8.6. Editing a Mark

You can edit the shape of a Mark, regardless of whether it was a Custom Mark (created from an existing object) or a Standard Mark

1. Select the Mark you want to edit
2. In the **Mark Inspector**, click the **Edit** button, or double-click the Mark while holding the Alt key.

The Mark will be opened in a special Editing mode on top of your document window, where you can edit the Mark.

3. Click the **Back to Document** button to close the Editing mode, and return to your document window.

The preview of the Mark is automatically updated.

9.8.7. Updating Marks

In some specific situations, it can occur that a Dynamic Mark goes "out of sync".

- When a placed file was altered outside of ArtPro+, e.g. if a separation is removed from a linked image in Photoshop. If the separation isn't used elsewhere in the document, it should no longer appear in the Marks.
- If a Text Mark uses a variable that was changed on the Automation Engine side.

Marks in ArtPro+ are updated automatically in a number of situations

- If embedded Placed Art is changed in **Edit Placed Art** mode, marks are updated immediately. See [Edit Placed Art](#) on page 142
- For linked placed Art that was edited outside of ArtPro+, selecting **Update** will also trigger the marks to update. See [Update](#) on page 140
- In text marks, changes to the local variables are automatically picked up
- Marks containing server variables that were changed in Automation Engine side, will be updated when the file is edited after opening the file.

Note:

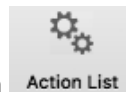
Server variables are only updated once per ArtPro+ session, so if the server variables are once again changed on the Automation Engine server while the file is open in ArtPro+, ArtPro+ will not pick this up until the document is reopened and edited again.

9.9. Action Lists

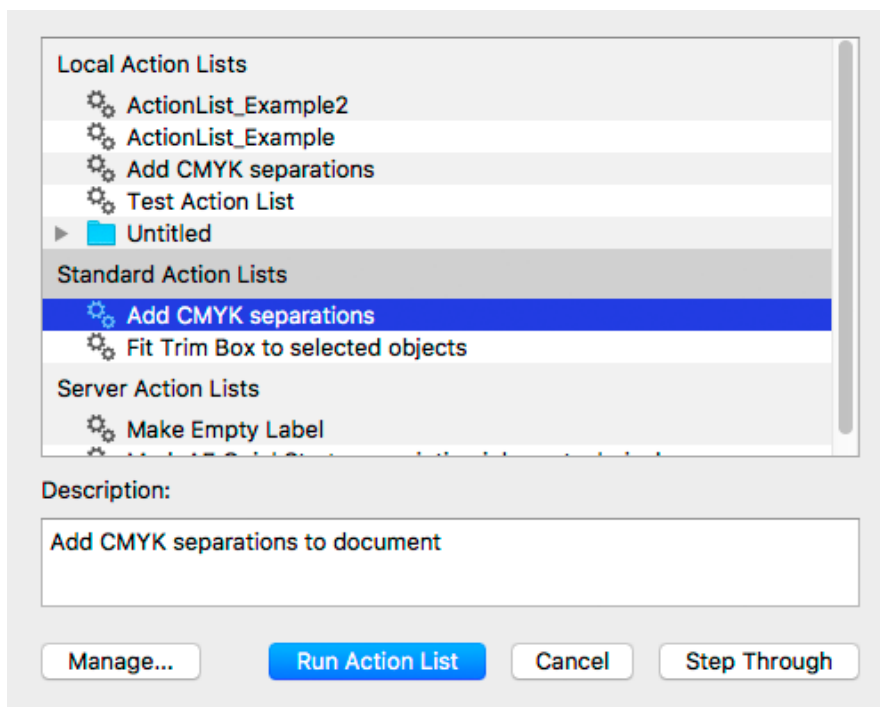
Using **Action Lists** you can automate a number of ArtPro+ functions. Action Lists are managed in the **Action List Preferences**.

9.9.1. Running an Action List

1.



In the Toolbar, click the **Action List** button , choose **File > Action List > Run Action List** or use its shortcut **Cmd+Alt+Shift+A** (Mac) or **Ctrl+Alt+Shift+A** (Windows).



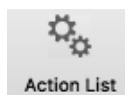
2. Select the Action List you want to run, and click **Run Action List**, or double-click the Action List.
3. You can also click the **Manage...** button to open the Action List tab of the Preferences. See [Managing Action Lists](#) on page 230
4. If you want to run an Action List step by step, or check if the action list does as you expect, or if you only want to execute a part of an Action List, you can click the **Step Through** button. See [Stepping through an Action List](#) on page 229

Stepping through an Action List

The **Step Through** function in Action Lists can be used for various reasons:

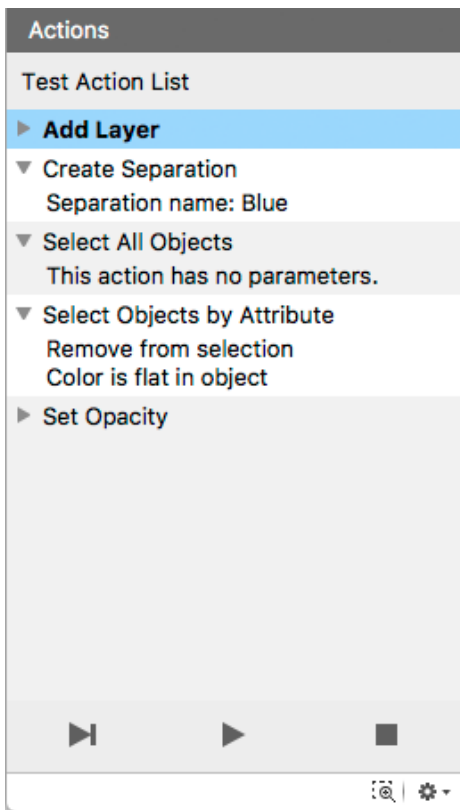
- To run an Action List step by step, and checking the result of every step individually, e.g. to debug the action list.
- To run only a part of an Action List
- To perform additional actions (e.g. changing the selection) in the middle of an Action List.




1.



In the Toolbar, click the **Action List** button , choose **File > Action List > Run Action List** or use its shortcut **Cmd+Alt+Shift+A** (Mac) or **Ctrl+Alt+Shift+A** (Windows).

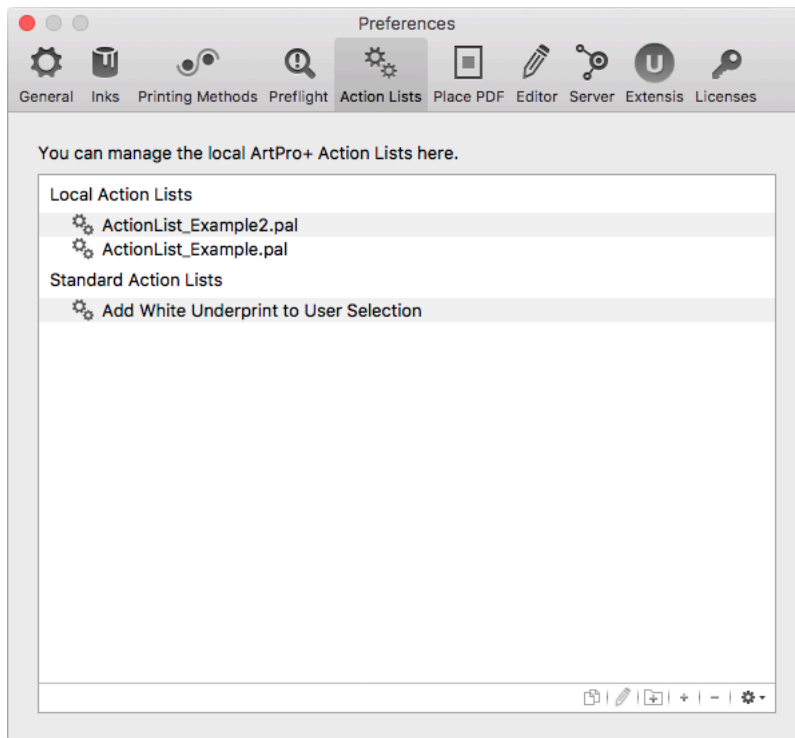
2. Select the Action List you want to use, and click the **Step Through** button. The **Actions** side drawer becomes visible on the left side of the window.






- a) Click the triangle in front of an Action to show or hide the settings for it
- b) Click an Action to select it
- c)
 - Select **Perform Selected Action** from the fly-out menu, or click the  button to perform the selected Action
- d) Select **Run Selected Action and all Actions below** from the fly-out menu, or click the  button to perform the selected Action and all following actions.
- e) Enable **Zoom to Selection** to automatically zoom in on the object(s) selected after the performed Action.
- f)
 - Select **Exit Step-Through mode** from the fly-out menu, or click the  button to stop the Step Through and close the Action side drawer.

9.9.2. Managing Action Lists

Click the **Manage...** button in the Action List dialog to open the Action Lists tab of the Preferences. You can also open the Preferences and switch to the Action Lists tab then. See [Preferences](#) on page 34




You have three types of Action Lists: **Local Action Lists**, in which you can add, edit and remove Action Lists, **Standard Action Lists**, which contains pre-configured Action Lists provided by Esko, and **Server Action Lists**, only available if you have an Antomation Engine Connection.

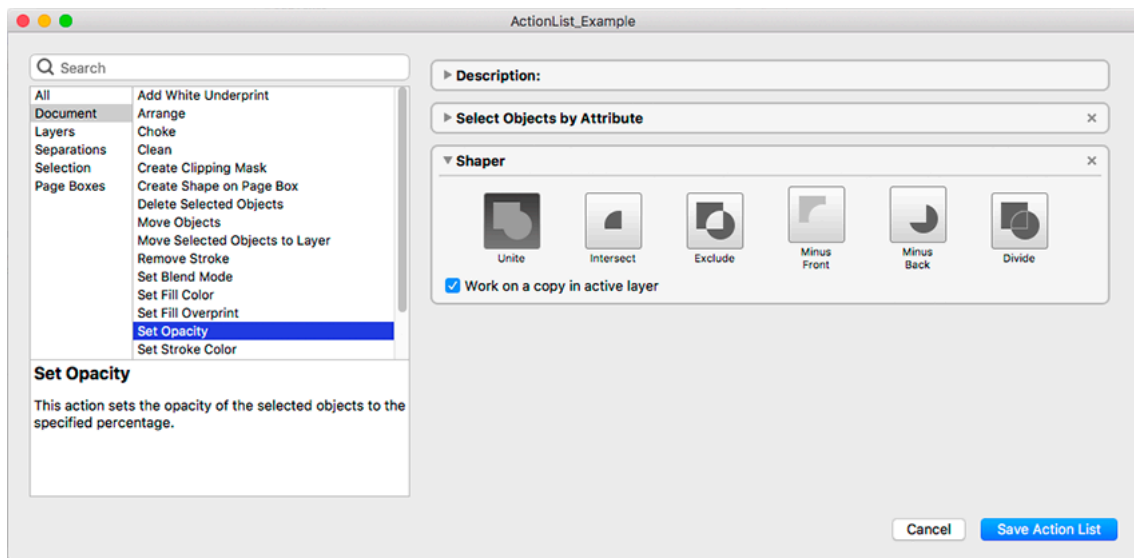
- Double-click an Action List name or folder to change its name.
- Click the  button to add a (sub)folder
- Click the **+** button or choose **New** from the fly-out menu to create a new Action List from scratch. If you have a folder selected, the Action List is created inside the folder.
- Click the **-** button or choose **Delete** from the fly-out menu to remove the selected folder or Action List
- Double-click the icon in front of the name, click the  button or choose **Edit** from the fly-out menu to edit the Action List in the **Action List Editor**. See [The Action List editor](#) on page 232
- Click the  button or choose **Duplicate** from the fly-out menu to make a new Action List based on an existing one.
- Click and drag to move Action Lists in or out a folder or section.

When dragging, The default action can be to move (e.g. from one subfolder to another) or to copy (e.g. from Standard Profiles to Local Profiles). You can use the standard modifier

keys to force copying (Alt key) or moving (Cmd on Mac, Shift on Windows). You can't remove Standard Action Lists.

9.9.3. The Action List editor

In the Action Lists tab of the Preferences, if you double-click an Action List icon, or select it and click the  button or choose **Edit** from the fly-out menu, the Action List Editor will open. See [Managing Action Lists](#) on page 230.



1. The left side of the dialog shows the available Actions. For more information on the available actions, see [Actions](#) on page 233
 - If you enter a keyword in the **Search** field, only the actions containing the keyword - within the selected category (see below) - will be shown.
 - Click a category in the left column to only see actions from this category, or select "All" to see all available actions.
 - Select an action in the right column to see some information about it in the bottom part.
 - Double-click an action to add it at the bottom of your Action List in the right side of the dialog. You can also drag it to the desired location.
2. The right side of the dialog shows the actions in your Action List
 - On top, you can set a **Description** for the Action List.
 - For every action, you can make a number of specific settings. E.g. in **Select Objects By Attribute** you can select the attributes used to do the selection. For some actions, you can use **Parameters**, e.g. the name for a new Layer. See [Parameters in Action Lists](#) on page 237
 - Click and drag Actions to change the order. The **Description** always stays on top of the list.
 - Click the triangle to collapse the Actions, so you get a better overview of the complete Action List.
3. Click **Save Action List** to save the Action List.

Actions

This gives an overview of all the Actions currently available for use in Action Lists, along with some basic information on the setup.

For some actions you can enable **Ignore Case**. When enabled, differences in case (e.g. "Artwork Layer" versus "artwork layer") is ignored, and the two are considered the same.

For some actions, the **Active Layer** is used. See also [Layers](#) on page 67

- Selecting a layer - manually or by using an action - makes it the active layer.
- If multiple layers are selected, the topmost selected layer will be the active layer.
- If no layer is selected, the topmost layer is the active layer.

Some actions allow the use of wildcards: the asterix sign * matches zero or more characters, the question mark ? matches a single character.

Document

Add White Underprint

Adds white underprint to selected objects. See [White Underprint](#) on page 183

Arrange

This action will move selected objects. The objects can be moved to the front or to the back, or they can be sent forward or backward. See [Arrange objects](#) on page 91

Choke

This action runs a Choke operation on the selected objects. The original paths are kept untouched if the 'Copy' check box is ticked. The resulting path gets selected. See [Spread / Choke](#) on page 106

Clean

This action requires a selection of objects, and will run the enabled clean actions on the selected objects. See [Clean](#) on page 109

Create Clipping Mask

This action requires a selection of objects, in which the topmost selected object is a path. The path will become a clipping mask clipping the other selected contents. If needed, the clipped contents will move down. See [Clipping Mask](#) on page 99

Create Shape on Page Box

This action will create and select a shape (a Rectangle or an Ellipse) based on a page box. The resulting shape will be created on top of the selected layer. If no layer is selected, the shape will be created in the topmost layer, as topmost object. See [Page Boxes](#) on page 65

Delete Selected Objects

This action requires a selection of objects, and will remove the selected objects from the document. See [Delete](#) on page 90

Move Objects

This action moves the selected objects by a relative distance. The gradients, patterns and opacity masks of these objects are moved as well. See [Numeric Transform](#) on page 95

Move Selected Objects to Layer

This action requires a selection of objects. The action moves the selected objects into the active layer. See [Layers](#) on page 67

Remove Stroke

This action removes any strokes from the selected objects. See [Stroke Inspector](#) on page 116

Set Blend Mode

This action sets the blend mode of the selected objects. See [Transparency Inspector](#) on page 118

Set Fill Color

This action creates a color from the selected separation(s). The color is used to fill the selected objects at the specified percentage. If no separation is selected, the color is set to white (all separations zero). See [Fill Color and Stroke Color Inspector](#) on page 111

Set Fill Overprint

This action sets the fill of the selected objects to overprint. See [Flat Color](#) on page 112

Set Opacity

This action sets the opacity of the selected objects to the specified percentage. See [Transparency Inspector](#) on page 118

Set Stroke Color

This action creates a color from the selected separation(s). The color is applied to the stroke of the selected objects at the specified percentage. If no separation is selected, the color is set to white (all separations zero). If the selected objects have no stroke, then the default stroke weight is applied. See [Fill Color and Stroke Color Inspector](#) on page 111

Shaper

This action runs a Shaper operation on the selected objects. The result of the operation is created in the active layer and gets selected. The Divide operation uses the Darkest color to fill the result. The original paths are kept untouched if 'Work on copy in active layer' is checked. See [Shaper](#) on page 123

Spread

This action runs a Spread operation on the selected objects. The original paths are kept untouched if the 'Copy' check box is ticked. The resulting path gets selected. See [Spread / Choke](#) on page 106

Subtract White Underprint

Subtracts white underprint from selected objects. See [White Underprint](#) on page 183

Layers**Add Layer**

This action creates and selects a new layer, either on top of the existing layers or on top of the Artwork layers (below the Processing Step layers). If such a layer already exists, it is just selected. See [Layers](#) on page 67

Delete Layer

This action requires a selection of layers, and will remove the selected layers from the document. See [Layers](#) on page 67

Invert Layer Selection

This action inverts the layer selection in the Layers panel. See [Layers](#) on page 67

Rename Layer

This action requires a selection of one or more layers, and will rename the selected layers. See [Layers](#) on page 67

Rename Layer with Wildcards

This action replaces the name of all layers that match the Old Layer Name by the New Layer Name. Wildcards (*) are allowed. See [Layers](#) on page 67

Select Artwork Layers

This action selects all Artwork Layers. See [Layers](#) on page 67

Select Empty/Non-Empty Layers

This action selects empty (or non-empty) layers. See [Layers](#) on page 67

Select Layer by Name

This action selects layers based on their name (wildcards allowed). See [Layers](#) on page 67

Select Layer by Processing Step

This action selects layers based on their processing step (type). See [Processing Step Layers](#) on page 70

Select Layers on Printing State

This action selects layers based on their printing state. See [Visibility, Locking and Printing state](#) on page 69

Set Layer Printing State

This action will set a layer printing state for the selected layer(s). See [Visibility, Locking and Printing state](#) on page 69

Set Processing Step Type

This action will set a Processing Step Type for the selected layer(s). No consistency check is done. See [Processing Step Layers Overview mode](#) on page 72

Separations

Create Separation

This action creates a new separation by the specified name. The created separation gets selected. If the separation already exists, it just gets selected. Separation names are always case sensitive. If the separation name is not found in the color database, the new separation will be created using preview color values. See [Separations](#) on page 74

Delete Separation

This action requires a selection of separations, and will remove the selected separations from the document. See [Separations](#) on page 74

Invert Separation Selection

This action inverts the separation selection in the Separations panel. See [Separations](#) on page 74

Rename Separations With Wildcards

This action replaces the name of all separations that match the Old Separation Name by the New Separation Name. Wildcards (*) are allowed. See [Separations](#) on page 74

Settings: Old Separation Name (including wildcards), New Separation Name and Ignore Case

Reorder Separations

Make your ordered separation list using wildcards (*) if needed. The top-most separation in the list will be printed first. You can also specify your separations as one comma-separated line. Separations that don't match any of the lines are placed underneath, in their original order. See [Separations](#) on page 74

Replace Separations

This action replaces the selected separations by the target separation. If the target separation does not exist, then no replacement is done. See [Separations](#) on page 74. See also [Screening when merging separations](#) on page 186

Select Separation by Name

This action selects separations based on their name (wildcards allowed). See [Separations](#) on page 74

Select Separation by Printing Method

This action selects separations based on their printing method. See [Separations Setup](#) on page 77

Select Separations by Processing Step

This action selects separations used in Processing Steps only. See [Processing Step Layers](#) on page 70

Set Printing Method

This action requires a selection of one or more separations, and will set the requested printing method (default or custom). See [Separations Setup](#) on page 77

Set Separation Type

This action requires a selection of one or more separations, and will set the requested separation type. See [Separations Setup](#) on page 77

Selection

Invert Object Selection

This action inverts the object selection.

Select All Objects

This action selects all objects.

Select Objects by Attribute

This action selects objects based on a number of criteria. It can create a new object selection, add objects to the existing selection or remove objects from the current selection. See [Select Advanced](#) on page 86

Select Objects in Layer

This action selects all objects in the selected layers. See [Layers](#) on page 67

Page Boxes

Remove Page Box

Removes selected page box.

Set Page Box Size

This action sets the size of the selected page box. See [Page Boxes](#) on page 65

Set Page Box Size by Content

This action sets the size of the selected page box to the bounding box of the selected objects. You can fit the selected page box in vertical direction, horizontal direction or both. See [Page Boxes](#) on page 65

Set Relative Page Box Size

This action sets the size of the selected page box relative to the reference page box. See [Page Boxes](#) on page 65

Action Lists and Selections

A lot of the actions that can be defined in an Action List require a **selection**. For example, a "Shaper" action is run on the selected objects.

You can define this selection in the Action List itself, by starting with a **Selection** action. This means the Action List can be run both in the editor and on the server.

In ArtPro+, you can also make a selection prior to running the Action List.

Any selection is maintained throughout the Action List until another selection is made.

In an automated workflow on the server, you obviously can't make a manual selection prior to running the Action List. If no selection action is defined, or if the Selection action doesn't result in any selected objects, the action won't do anything, since it would be run on an empty selection.

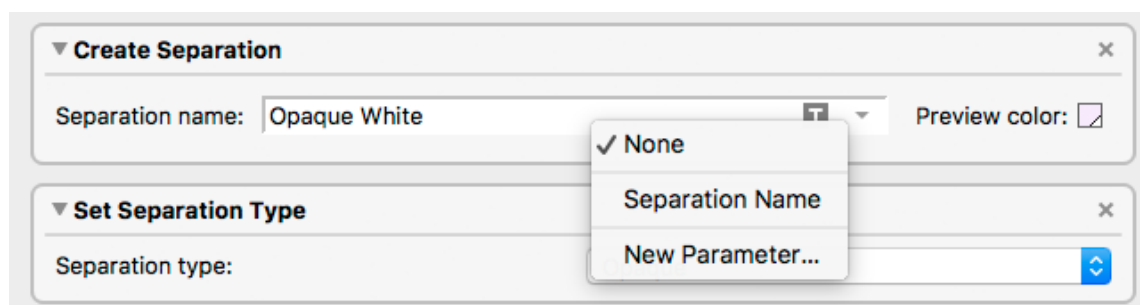
When it comes to **layer selections**, if no layer is selected, the active layer is used. In ArtPro+ this is the one marked in bold. In an automated workflow, this means the topmost layer.

Parameters in Action Lists

If the settings of an Action in an Action List contain an input field, you can set a static, fixed value, or you can use a **Parameter**.

An icon at the right side of the input field indicates the type of parameter that can be used: text, a percentage, a distance, ...

You can set a static, fixed value, or you can use an **Action List Parameter**. An Action List Parameter has one specific value in ArtPro+. However, when running the Action List on Automation Engine, the value for the Parameter becomes visible and can be changed in the Automation Engine Pilot, either as a fixed value or using SmartNames. For more information on Automation Engine, we refer to the Automation Engine documentation.



- Enter a value in an input field to use a static value
- Click the Parameter Type icon or the triangle, and select **New Parameter...** to create a new Action List Parameter.

You can then define the name and initial value for the Parameter. If the input field already had a value, this will be used as initial value for the Parameter.

When you click the **Add** button, the newly created Parameter will be used in the input field, shown in blue.

- If you click the Parameter Type icon or the triangle, the dropdown will show all existing Parameters of the same type (text, percentage, ...). Click it to use it.
- Click the Parameter Type icon or the triangle, and select **None** to go back to using a static parameter. The initial value of the

Note: When saving the Action List, Action List Parameters that are not used, will be removed.