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# File Preparation Guide

for offset, digital  
& wide format printing

09.25.18/v3.0

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# Introduction

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This booklet was created by our Prepress staff to provide the graphic designers with colour management and page construction tutorials. Exploring the content and following the instructions of these tutorials will reduce the risk of disappointing results when submitting files for print production.

Some of the topics contain links at the bottom of the pages to access more information from our industry partners.

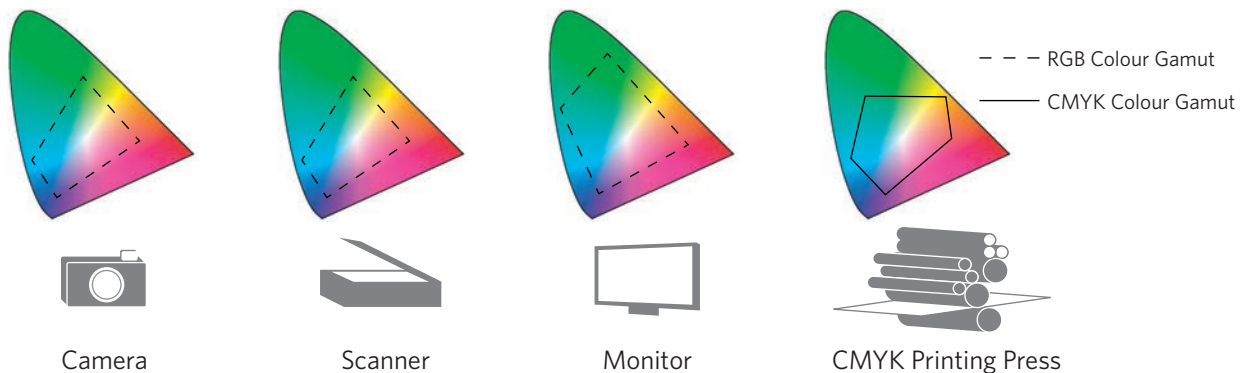
Thank you for your interest in Hemlock Printers' services. If you have questions while preparing your next print project, please email [fileprep@hemlock.com](mailto:fileprep@hemlock.com) to help you through any file preparation challenges.

Hemlock Printers Ltd.	t 604 438 2456
7050 Buller Avenue	1 800 663 2456
Burnaby BC	f 604 439 1692
Canada V5J 4S4	<a href="http://hemlock.com">hemlock.com</a>

# Colour Management Basics

## Colour Management in a Prepress Environment

Input, output and viewing devices use different colour modes to capture, display or print images. The various colour modes differentiate greatly in the amount of colours they can reproduce. For example, a digital camera captures RGB light with a wider gamut than what is reproduced when printed in CMYK mode onto paper.



In a Prepress workflow, a colour management system will provide consistent and predictable results when using multiple devices with various colour gamuts. Colour Profiles control the colour matching between the different devices. They define a viewing intent and are also used in the conversion process from one colour mode to another (e.g., RGB to CMYK).

## Colour Management Essentials

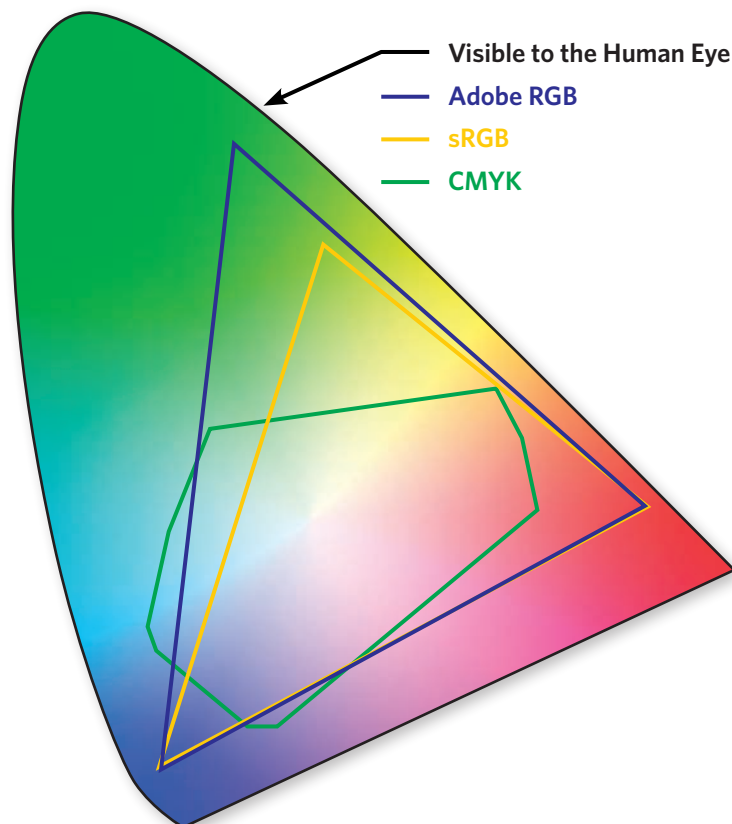
- Calibrated Monitor
- Proper workspace and viewing lighting conditions
- Proper use of colour profiles
- Proper use of Colour Management System (CMS) in the applications

# Colour Management Basics

## Gamut

Gamut refers to the colour range a viewing or output device is capable of displaying with ink on paper or other means of colouration.

The graphic below represents the visible spectrum the human eye can see and the possible range of each of the two different RGB colour spaces, as well as the gamut constraint of the CMYK colour mode.



# Colour Management Basics

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## Monitor Calibration and Other Considerations

Monitor calibration is an essential part of a colour managed workflow. All monitors will behave and appear different in varying workspace lighting conditions (ambient light). If the monitor is relied on making colour judgments, calibrating on a regular basis will provide more accurate colour and ensure consistency. While it is difficult, if not impossible, to have a monitor provide perfect representations of printed items, some form of monitor calibration is at least better than no calibration.

- **Software Based Calibration**
  - Built into Mac OSX and Windows
  - (+) *cost effective*
  - (-) *inconsistent*
- **Hardware Based Calibration**
  - SpyderExpress / ColorMunki
  - (+) *good for multiple monitor environments*
  - (-) *requires external device / can be costly*
- **Lighting Conditions** are important. In order to see colour as it was intended, the ambient light in a work space should be controlled.
- **Viewing Conditions** The North American standard for viewing proofs and other reference materials such as original artwork and press sheets is 5000°K (Kelvin). This colour temperature standard is to simulate daylight conditions.



# Colour Management Basics

## Monitor Calibration Target

An Apple monitor can be calibrated using the tools in the **System Preferences**.

### System Preference > Hardware > Displays > Color > Calibrate

To compare the monitor colour to the colour of an industry standard proof, a calibration target can be displayed for reference. The display file is available for download at: [pdf.hemlock.com](http://pdf.hemlock.com). Upon request, Hemlock will supply a \*GRACoL certified hard-copy proof of a monitor calibration target as illustrated below.



\*GRACoL = General Requirements for Applications in Commercial Offset Lithography

GRACoL is governed by IDEAlliance® [www.idealliance.org](http://www.idealliance.org)

# Colour Management Basics

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## RGB Colour Mode

RGB (Red, Green, Blue) is the mode in which images are scanned or captured with a camera and displayed on a monitor. When the primaries mix with light in various proportions, the visible spectrum is created. The intensity values range from 0 (Black) to 255 (White) for each of the Red, Green, Blue components in a colour image.

The RGB colour mode in Photoshop varies according to the working space setting that is specified in the “Color Settings” dialog box.\*

\*[helpx.adobe.com/en/photoshop/using/color-modes.html](http://helpx.adobe.com/en/photoshop/using/color-modes.html)

Keep the images as long as possible in RGB mode for the following reasons:

- Greater flexibility in Photoshop for image editing tasks
- Opportunities to convert images based on different output requirements
- Avoid having multiple versions of a file

Some RGB images have a wider (larger) gamut than what can be printed in CMYK mode (see page 3). It is therefore recommended to use **View > Proof Colors** in Photoshop to preview a simulation of how the images will appear when converted to CMYK.

Original Image



RGB Separations (Simulation)



# Colour Management Basics

## CMYK Colour Mode

CMYK (Cyan, Magenta, Yellow, Black) is the colour mode for printing, whether it is on your desktop printer, a digital press or an offset press. The intensity values are expressed in percentages (%), ranging from 0% (paper white) to 100% for full ink density in each of the channels (CMYK). Total ink density should not exceed 340% for commercial offset printing. The black channel enhances detail and creates stronger neutral blacks in a colour image.

The CMYK colour mode in Photoshop varies according to the working space settings that is specified in the “Color Settings” dialog box.\*

\*[helpx.adobe.com/en/photoshop/using/color-modes.html](http://helpx.adobe.com/en/photoshop/using/color-modes.html)

White Point, Grey Balance and Black Values in a CMYK Image

Ink	Highlight (with Tone)	1/4 Tones	Mid-Tones	3/4 Tones	Black
C	3%	25%	50%	75%	92%
M	2%	19%	40%	66%	80%
Y	2%	19%	40%	66%	80%
K	0%	0%	10 - 15%	60 - 70%	90%

Original Image

CMYK Separations

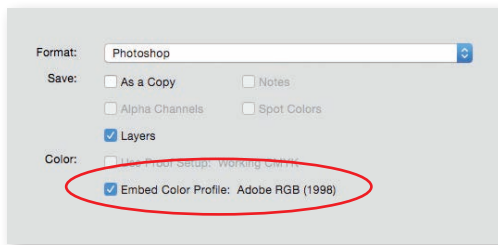


# Colour Management Basics

## Colour Profiles

### RGB Colour Profiles

Most input devices such as cameras and scanners will assign a profile when saving the file. These RGB profiles are an integral part of a colour managed workflow. The profiles define a viewing intent and play a roll in how an image will convert from one colour mode to another (e.g. RGB to CMYK). It is therefore important to embed the profile when saving an image from Photoshop.



The “Embed Color Profile:” ... must be checked to avoid unexpected results in a colour managed Prepress workflow.

Same RGB Image with different outcomes:



Saved image with embedded colour profile.



Saved imaged without colour profile.  
A default colour profile was used when converted from RGB to CMYK.

# Colour Management Basics

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The most common RGB profiles are:

- **Adobe RGB (1998)** - has a larger range of colours (gamut) and is considered the standard for a Prepress workflow.
- **sRGB IEC61966-2.1** - is considered the 'safe' profile and is intended to look good for most output situations and for viewing on a monitor.

## CMYK Colour Profiles

When converting RGB to CMYK, it is important to choose the correct output (CMYK) profile for the specific requirements. For Hemlock (and other offset sheetfed printers), the recommended output profile is: "GRACoL 2006 (ISO 12647-2:2004)". It is one of many CMYK output profiles available in Photoshop.

## Converting from RGB to CMYK can be performed in the following places:

- Photoshop
- InDesign when exporting the pages to PDF
- Illustrator when saving as a PDF
- Hardware/Software systems that control the output device

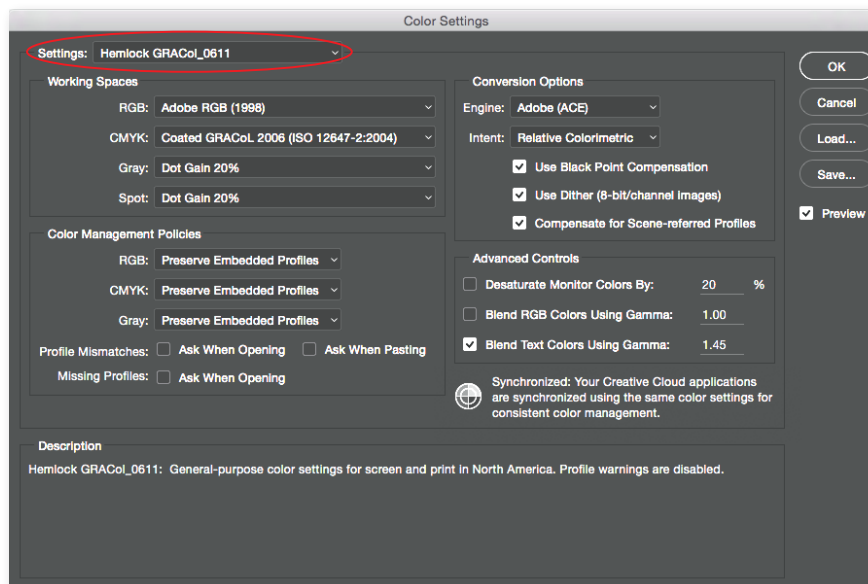
# Colour Management Basics

## Setting Up a Colour Managed Workflow in Adobe CC

### Color Settings File (CSF) in Photoshop

To ensure colour consistency throughout all applications in Adobe CC, the correct CSF must be installed and synchronized.

Photoshop's Color Settings:



A Color Settings File (CSF) can be requested from the Print Provider in order to match their specifications. Hemlock Printers' CSF file can be found at: [pdf.hemlock.com](http://pdf.hemlock.com)

It is also possible to create a custom CSF. Go to: **Photoshop > Edit > Color Settings** and save the CSF file. It can then be synchronized with other Adobe applications.

# Colour Management Basics

## Synchronizing with Adobe Bridge

Adobe Bridge's Creative Cloud Color Settings:



How to Load and Synchronize CSF files:

- Open **Bridge > Edit > Color Settings** and select **Show Saved Color Settings Files** ❶.
- Load the CSF file into the folder
- Select the CSF file from the list ❷ and choose **Apply** ❸. This will synchronize the settings with all other Creative Cloud Applications to create a Coloured Managed Workflow

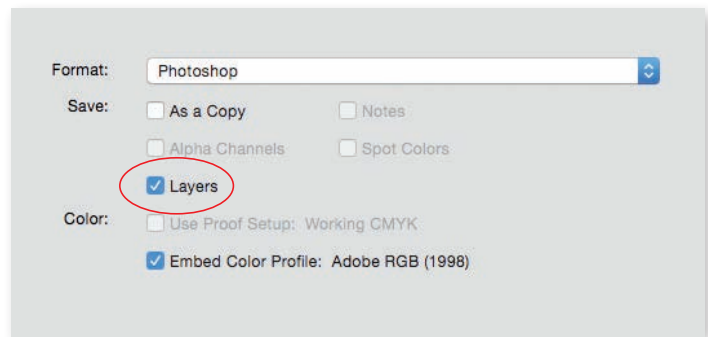
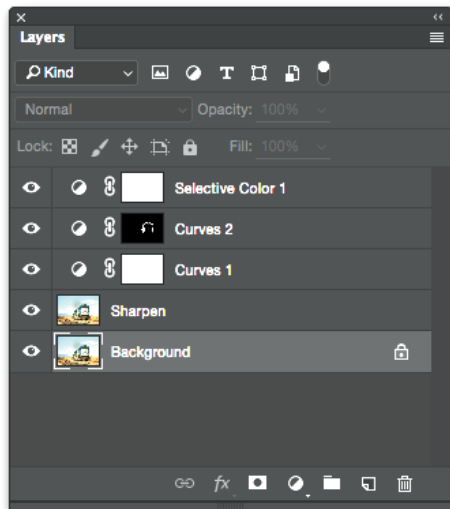




# Image Editing Basics

## Adjustment Layers

It is advisable to make colour corrections using adjustment layers rather than executing the corrections directly on the image. This is referred to as a non-destructive workflow. It allows for further changes in the editing process as well as applying other effects like Blend Modes and Opacity. Masks can be used with the Layers to allow for selective editing.



Always save the image as a Photoshop.psd file with Layers selected. This will allow options for making future edits.

# Image Editing Basics

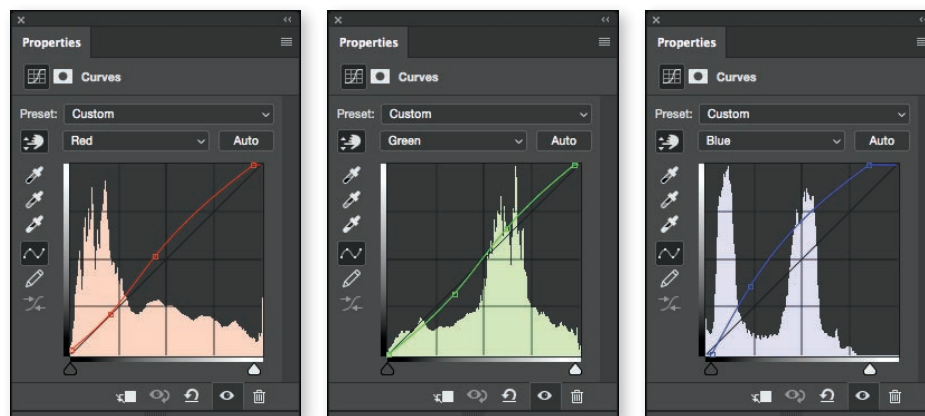
## Colour Corrections with Curves

Curves (*Image > Adjustment > Curves*) allows for adjustments along the tonal range of an image. This can be performed overall or to individual channels. It is a good tool for creating contrast, or making colour and grey balance adjustments in an RGB image before converting to CMYK.

Original Image



Curve Applied



[helpx.adobe.com/en/photoshop/using/curves-adjustment.html](https://helpx.adobe.com/en/photoshop/using/curves-adjustment.html)

# Image Editing Basics

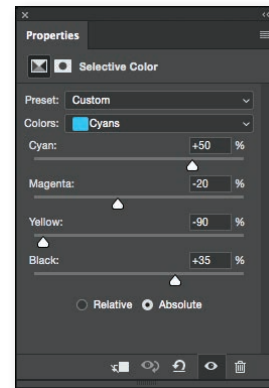
## Colour Corrections with Selective Color

Selective Color (*Image > Adjustment > Selective Color*) allows for adjustments to individual colour, eliminating the need for masking.

Curve Applied



Selective Color Applied



## Guidelines for Selective Color

- Avoid adding colours to **White**
- Avoid subtracting colours from **Black**
- **Relative** adds or subtracts a percentage of the current amount (e.g. +10 to 50%=55%)
- **Absolute** adds or subtracts to the amount of the current amount (e.g. +10 to 50%=60%)
- When used in RGB mode, adjustments are more sensitive than working in CMYK mode

[helpx.adobe.com/en/photoshop/using/matching-replacing-mixing-colors.html](https://helpx.adobe.com/en/photoshop/using/matching-replacing-mixing-colors.html) (*Mix Colors Selectively*)

# Image Editing Basics

## Image Sharpening

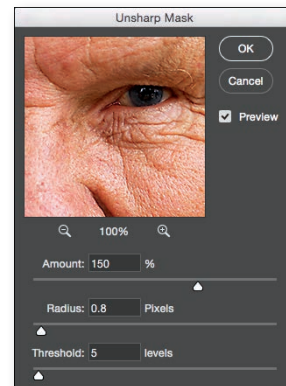
Sharpening (*Filters > Sharpen > Unsharp Mask or Smart Sharpen*) can be applied to enhance sharpness and detail in an image. Without sharpening, an image can appear soft or slightly blurry. Too much sharpening can create unwanted halos and artifacts.

Sharpening can be applied at any point during image editing, but should be applied after colour corrections are complete and the image is sized for its final output. The amount of sharpening depends on the output medium (e.g., monitor, paper).

Sharpening not Applied



Sharpening Applied

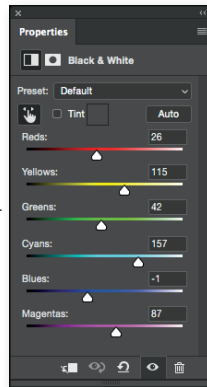


# Image Editing Basics

## Creating Greyscale Images

Greyscale images can be created from RGB and CMYK images easily by changing the colour mode to Greyscale. However, this method does not always give optimal results. Of the many ways Photoshop can convert an image to Greyscale, the Black & White Adjustment (*Image > Adjustment > Black & White*) is an effective tool.

Original RGB Image



Black & White Adjustment (settings may vary) and Images must be in RGB Image Mode prior to applying.

\*Note: After the Black & White Adjustment is applied, the RGB image must then be converted to Greyscale.

Result of an RGB image converted to Greyscale (*Image > Mode > Greyscale*)



Result of an RGB image converted to Greyscale using the Black & White Adjustment (prior to converting\*)



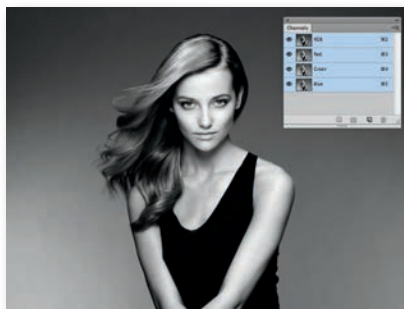
<https://helpx.adobe.com/photoshop/using/convert-color-image-black-white.html>

# Image Editing Basics

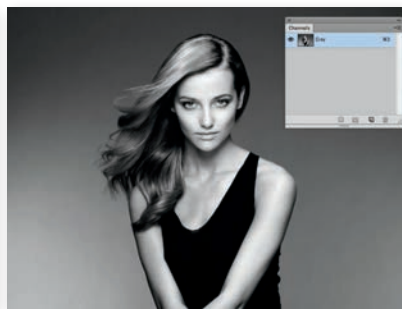
## Creating Duotones

Duotone images are often used for book projects to give the photography a rich look. They allow the creator to give the images a cool or warm appearance by selecting the desired spot colour(s).

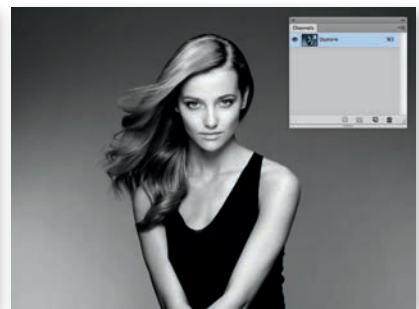
- **A Duotone can be created using:**
  - 2 spot colours
  - process Black + 1 spot colour
  - any 2 of the 4 process colours



Starting with an RGB Image



Convert to Greyscale



Change Color Mode to Duotone



Pantone 276 C + Pantone 471 C



Black + Pantone 420 C



Black + Cyan

[helpx.adobe.com/photoshop/using/duotones.html](http://helpx.adobe.com/photoshop/using/duotones.html)



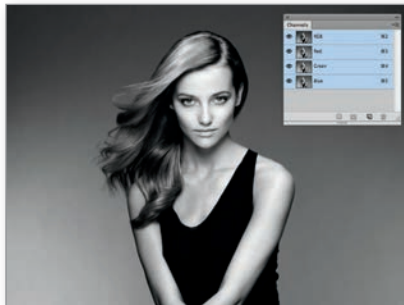
# Image Editing Basics

## Creating Quadtones

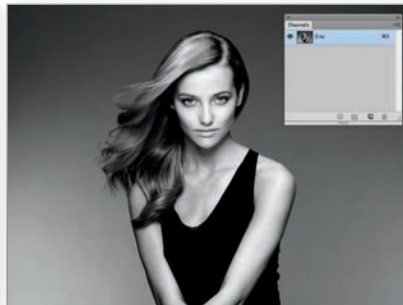
Quadtones are often used in CMYK printing to enhance Greyscale images with all four inks. It will reproduce black & white images with more richness and depth than when printed with Black ink only.

A Quadtone is usually created using the four process inks.

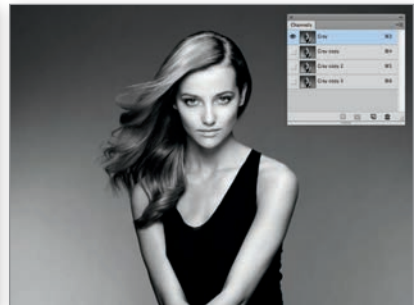
To minimize the risk of colour shifts in the printing process, the Black channel should be the dominant ink in the make-up of the Quadtone.



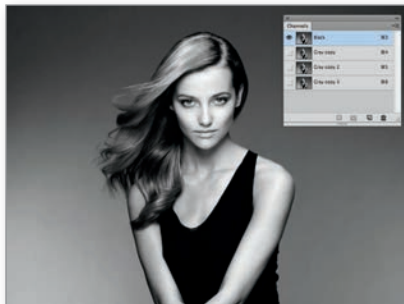
Starting with an RGB Image



Convert to Greyscale



Duplicate Grey channel 3x (total of 4)



Change Image Mode to Multichannel



Convert to CMYK



Apply Quadtone Curve





# Page Construction

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## Overview of the Most Common File Submission Errors

- **Page geometry:**
  - Trim size not as specified in the order confirmation
  - Inadequate or missing bleeds
  - Dieline issues (line weight, colour, geometry)
- **Images:**
  - Low-res (less than 150 ppi effective res) or
  - Over-res (1000 ppi or higher effective res)
  - Colour modes other than CMYK
- **Missing elements:** - Fonts or images

## Remedies

- **Page geometry:**
  - Confirm trim size before sending files
  - 1/8" bleed on all trim edges and into spine for perfect or spiral type binding
  - Create dieline to specifications provided
- **Image:**
  - Supply annotated laser or pdf file indicating low-res
  - Over-res images will be automatically downsampled
  - If RGB is supplied without instructions, an auto conversion will be applied using our standard conversion settings with the embedded RGB profiles
- **Preflight:**
  - Use "Preflight" in InDesign **Window > Output > Preflight** to examine your files for colour space and resolution information.
- **Package:**
  - Use the Package feature found in InDesign and Illustrator to gather all necessary fonts and links into one folder
  - It is possible to create a PDF when packaging your files
    - *be aware of the **Selected PDF Export** settings (see pages 40 & 41)*

# Page Construction

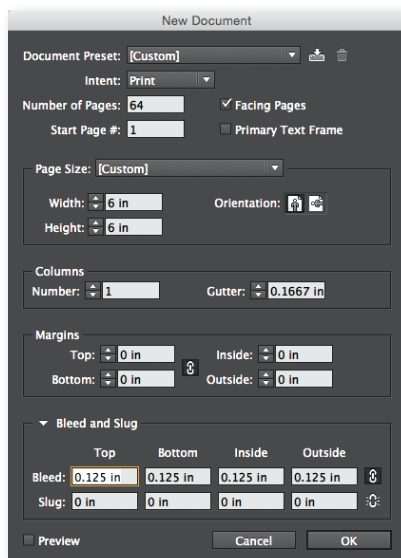
## Document Set-Up

When starting with a print project you must ensure that the following is entered in the “New Document” set-up menu correctly:

- Page size of finished, printed flyer, brochure, magazine, book etc.

**Document size = Trim**

- Select Facing Pages for multi-page documents such as books
- The Bleed amount is .125" all sides



For example, if the finished size of the book is 6" x 6", then make the Page Size 6" x 6".

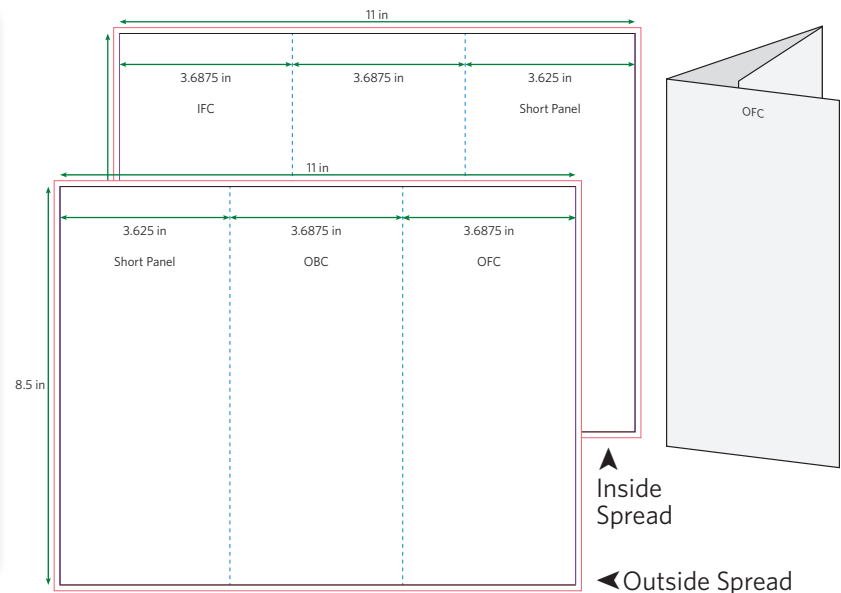
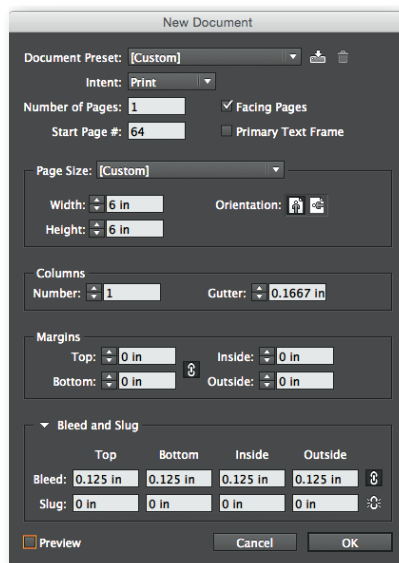
# Page Construction

## Document Set-Up for Unique Cases

When setting up a document with a short panel, such as a 6 panel roll fold brochure, the last panel will have to be shortened so that it can tuck into the fold and allow it to stay flat.

### Document size = Trim

For this example, the flat size of the roll fold brochure is 11" x 8.5". Build your document as 11" x 8.5", and measure out the panel widths within the document size.



If you are unsure how the finished, trimmed and folded product will look, you can ask your printer to provide a folded dummy before starting your print project.

# Page Construction

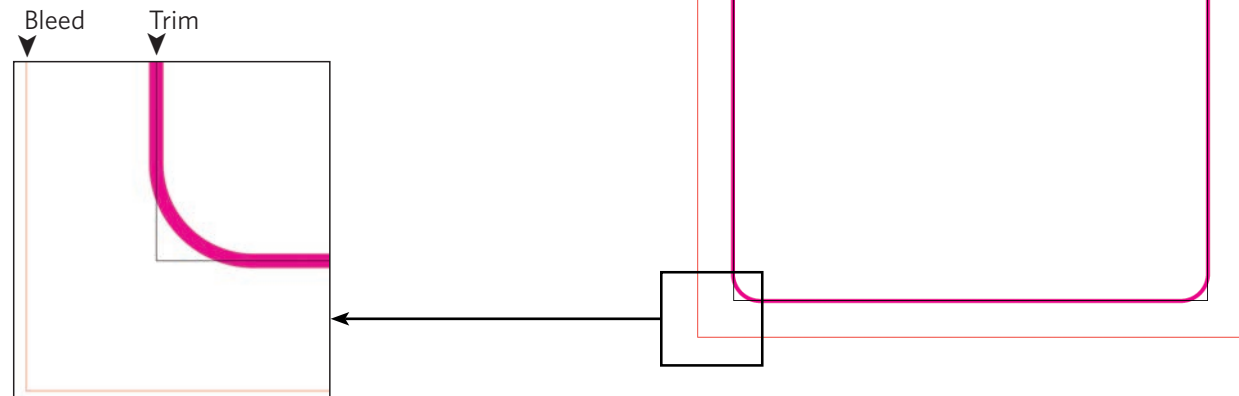
## Document Set-Up for Projects with Dielines

When your project will be diecut, make the trim size of your document the same dimensions as the finished size after diecutting. When creating your dieline, create a swatch called “Dieline” that is defined as a spot colour. Give your dieline a stroke width of 1 point. The center of the stroke is the position of the cut, so the dieline stroke should center on the trim size of the document when you position the dieline artwork in your file.

### Dieline Size = Trim Size.

Be sure to set bleed to .125" on all sizes.

solid lines		= cut
dashed lines		= score / fold
dash dot dash		= perforations

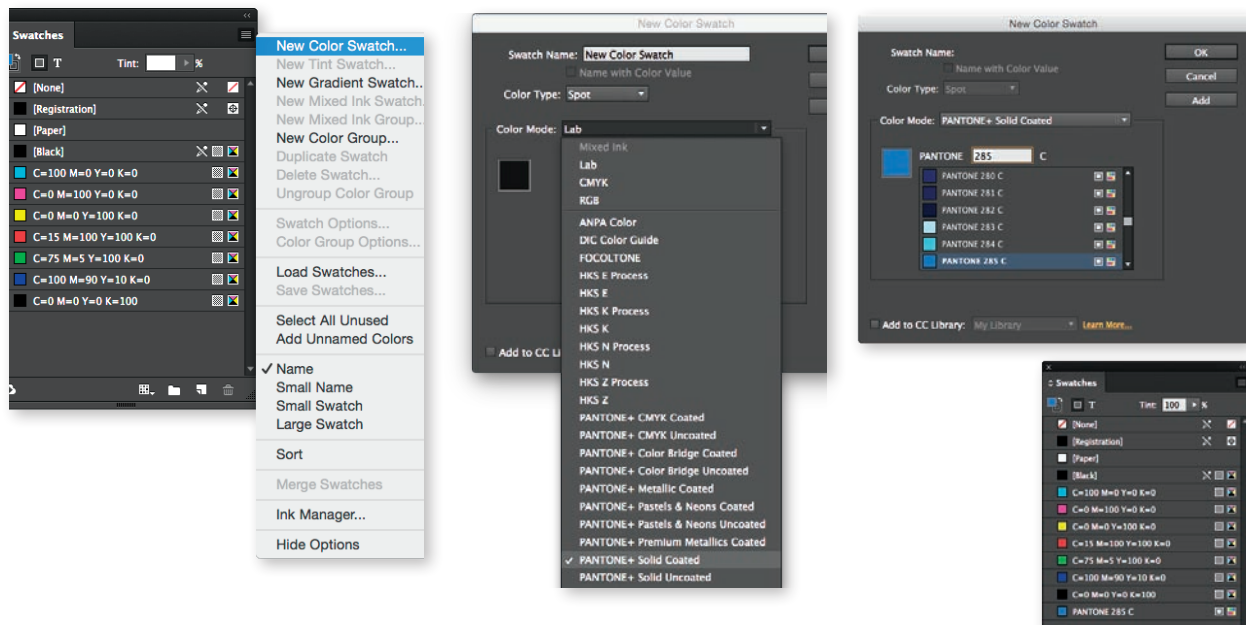


# Page Construction

## Working with PANTONE® (Spot) Colours

When the print specifications allow for printing PANTONE® colours, you must add a new swatch colour in your palette. A spot colour can be any colour from the PANTONE® library, or it can be a custom mix to match a corporate colour.

To add a spot colour follow the screen shots below:



In this example we added PANTONE® 285 C to the swatch palette. This new swatch can be used when building the pages in InDesign.

Please note: If you are working in another applications using the same spot colour, make sure the spot colour is named exactly the same way in all applications (e.g., do not name colour “PANTONE 285 C” in InDesign and “PANTONE 285 U” in Illustrator).

# Page Construction

## Managing Colour Swatches

Your Swatches palette should only contain colours used in your job.

Colours that are printing with an ink other than CMYK, and colours such as Deline, Varnish, Crease, Foil, etc., should be defined as “Spot”.



# Page Construction

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## Black versus Rich Black

When designing a print project with process colours (CMYK) which have large areas of black, such as solid black backgrounds or large black type, it is often desirable to use a CMY boost under the black. A boosted Black appears blacker. Hemlock's preferred **Rich Black** is 50% Cyan, 40% Magenta, 40% Yellow, 100% Black. Name the boosted black swatch **Rich Black**, or name it with the colour values.



100% black



50% Cyan  
40% Magenta  
40% Yellow  
100% Black

Type smaller than 18pt and rules that are thinner than 3 pt should not be boosted. Visually it will not be apparent, and boosting small areas increases the risk of mis-registration on press.

## Rich Black versus Double Hit Black

An alternative for a boosted black is to print a double hit of Black to maximize density. If your design contains graphics or fonts that could benefit from a double hit black ink, please consult with your Account Representative to review the best method suitable for your project.

## Double Hit Pantone® Colours

When there are large solids in a spot colour, it might be advisable to print those areas with a double hit of the same colour to ensure a smooth and uniform appearance on the printed page. In order to plan and set up the job for best possible printing results please consult with your Account Representative regarding availability of additional printing units and budget considerations.

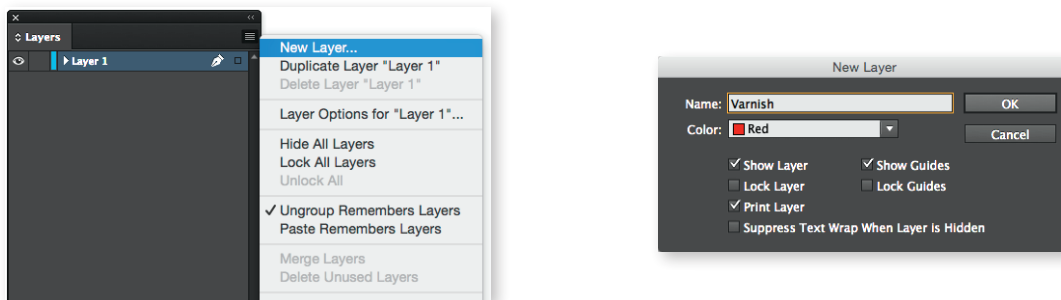
# Page Construction

## Working with Varnishes

Varnishes can be used to seal ink or it can be used for special design effect. Varnishes have to fit to the object's shape in exact registration.

After the layout and design is finalized, a varnish layer must be added in the layout program. Since changes occur during the design process, it is advisable to build the varnishes at the final stages of the project.

Create a new layer in the layout program and name it **Varnish**:



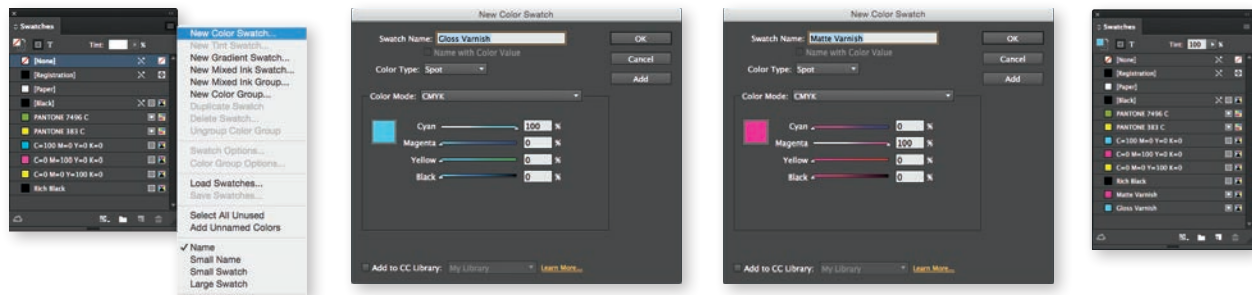
Copy all elements and paste them exactly in the same position in the new Varnish layer.

Create a new spot colour and assign the type of varnish to be used in the project. In the example on the next page, a "Gloss Varnish" coloured with 100% Cyan and a "Matte Varnish" coloured with 100% Magenta is used. Naming the type of varnish in the **Swatches** allows the print provider to plan for the appropriate varnish treatment intended for the design.

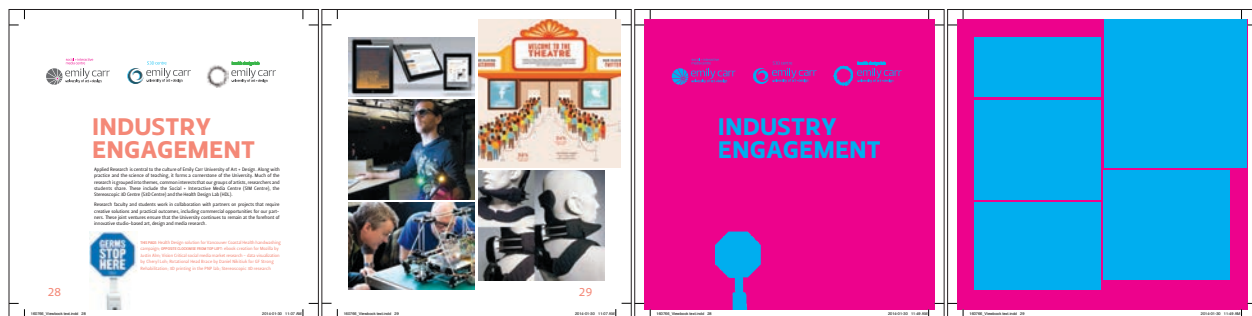


# Page Construction

Adding Varnishes to the Swatches:



Colourize Elements According to the Varnish Treatment:



Final PDF pages containing all printing inks only.

Final PDF pages containing the Varnishes only.

■ = Gloss Varnish treatment  
■ = Matte Varnish treatment

When submitting final PDF to a print provider, it is best practice to supply two sets of pages:

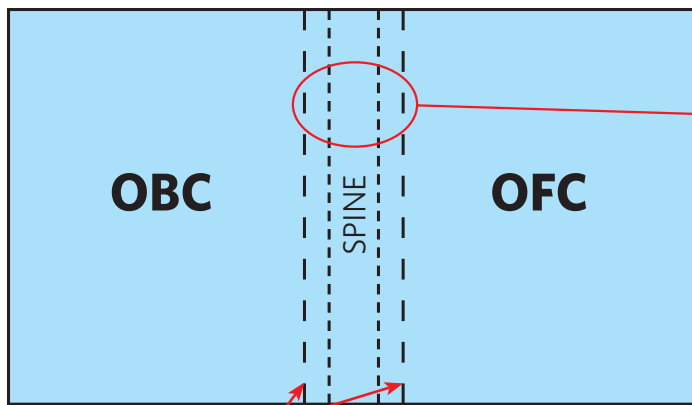
- One set of pages containing printing inks only (without Varnishes)
- One set of pages containing Varnishes only

# Page Construction

## Special Considerations for Specific Binding Techniques

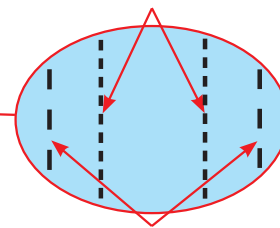
### Hinge Score for Perfect Bound Books – Covers

Outside cover – built as a “printer’s spread” with accurate spine width  
(Contact your Sales Representative to obtain this information).

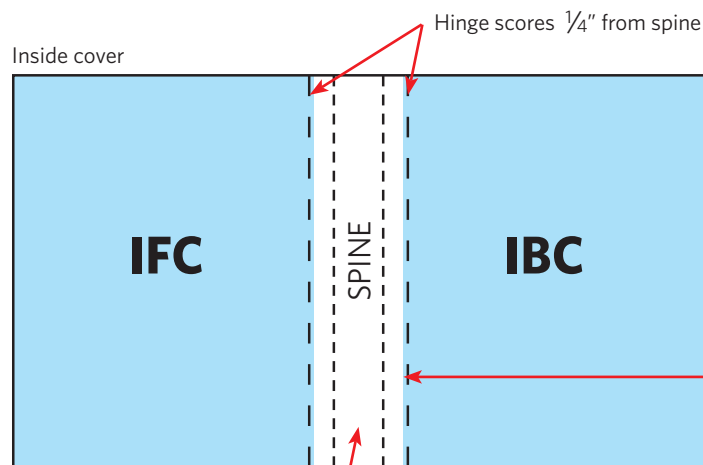


Hinge scores  $\frac{1}{4}$ " from spine

Add score marks at the spine



Add hinge score marks  
 $\frac{1}{4}$ " away from the spine  
on either side.



Inside cover

Hinge scores  $\frac{1}{4}$ " from spine

spine & glue knockout

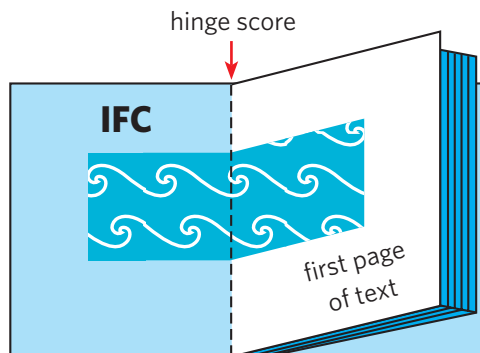
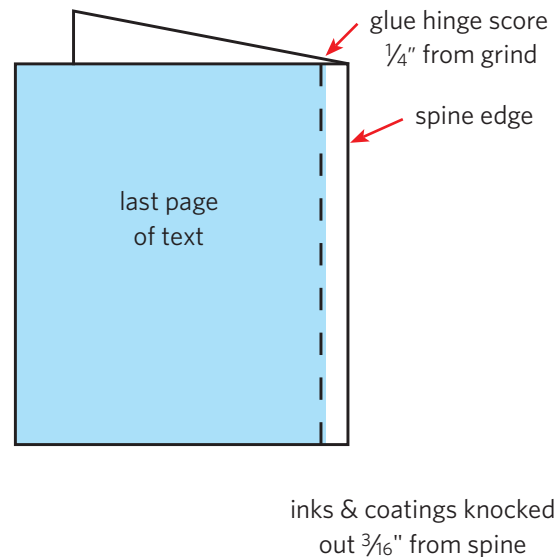
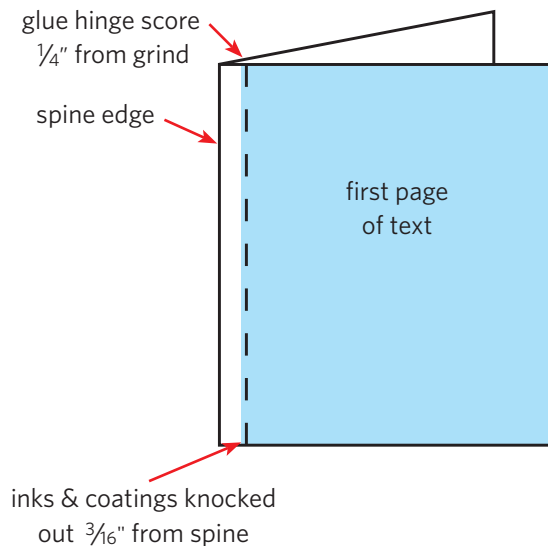


All inks and coatings  
must be knocked out  
from the inside spine,  
plus  $\frac{3}{16}$ " on either side.

# Page Construction

## Hinge Score for Perfect Bound Books – First & Last Pages

The first & last text pages of a perfect bound book must also have a glue hinge score applied,  $\frac{1}{4}$ " from the spine edge. Inks & coatings must be knocked out  $\frac{3}{16}$ " away from the spine edge.

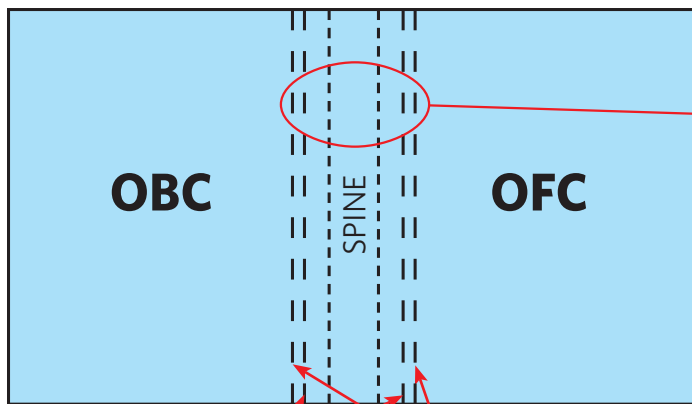


**Note:** If you have an image that crosses over from the inside front cover (IFC) to the first inside page (or last page to the inside back cover (IBC)), you **must** adjust your image position on each page to accommodate the  $\frac{1}{4}$ " ( $\frac{1}{2}$ " total) that is concealed by the glue hinge. The hinge score position on the first/last page will correspond to the hinge score position on the corresponding IFC/IBC.

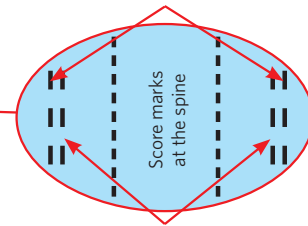
# Page Construction

## Hinge Score for Layflat Perfect Bound Books - Covers

Outside cover – built as a “printer’s spread” with accurate spine width  
(Contact your Sales Representative to obtain this information).



Add additional hinge score marks  $\frac{7}{16}$ " away from the spine on either side.

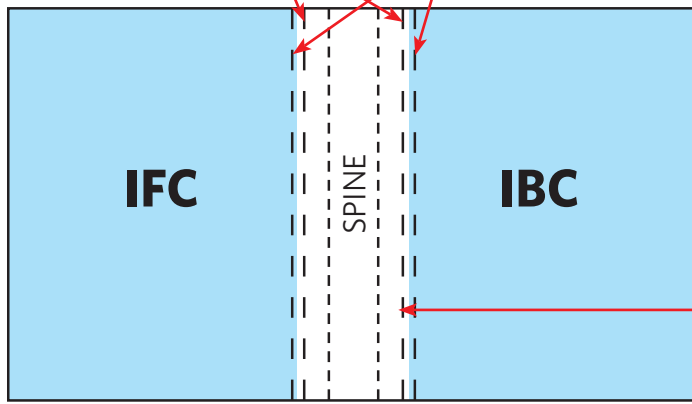


Add hinge score marks  $\frac{1}{4}$ " away from the spine on either side.

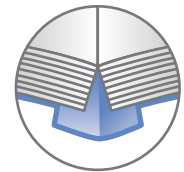
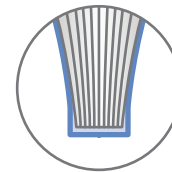
Hinge scores  $\frac{1}{4}$ " from spine

2nd scores  $\frac{7}{16}$ " from spine

Inside cover



spine & glue knockout

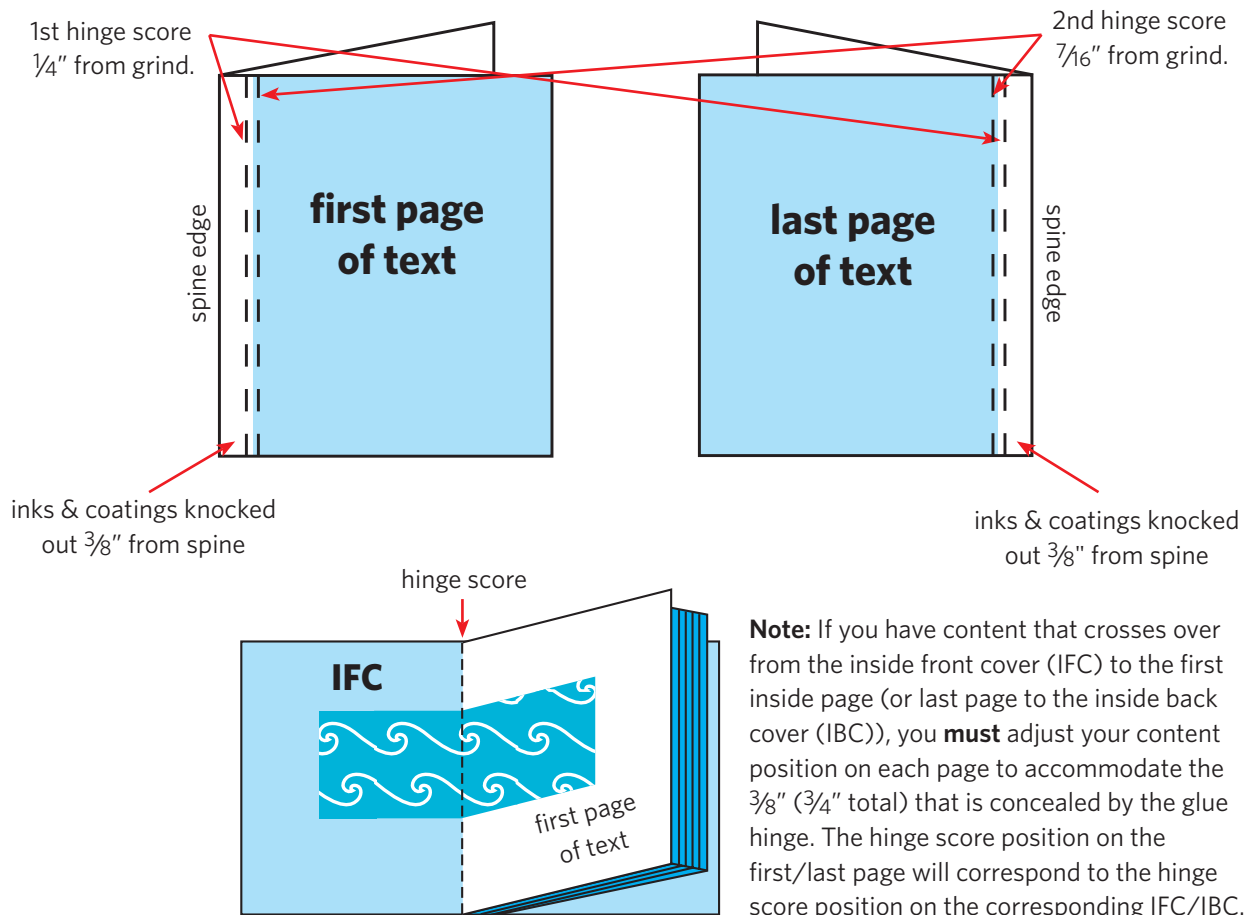


All inks and coatings must be knocked out from the inside spine, plus  $\frac{3}{8}$ " on either side, so the glue can properly adhere to the paper.

# Page Construction

## Hinge Score for Layflat Perfect Bound Books - First & Last Pages

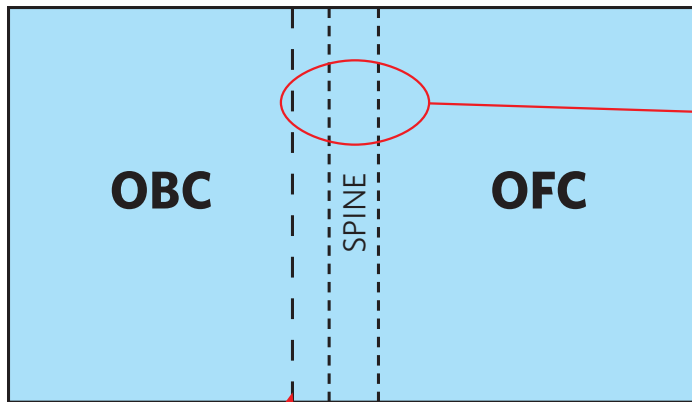
The first & last text pages of a perfect bound book must also have a glue hinge score applied,  $\frac{7}{16}$ " from the spine edge. Inks & coatings must be knocked out  $\frac{3}{8}$ " away from the spine edge.



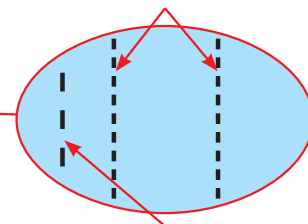
# Page Construction

## Hinge Score for Swiss Bind Books with Detached Covers - Cover

Outside cover – built as a “printer’s spread” with accurate spine width  
(Contact your Sales Representative to obtain this information).



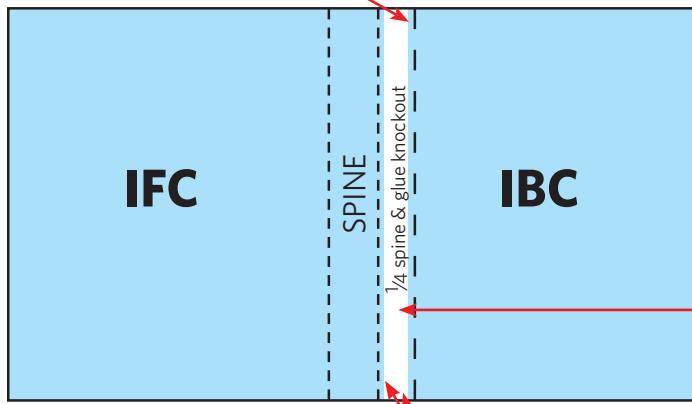
Add score marks at the spine.



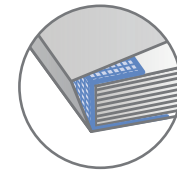
Add hinge score mark  
 $\frac{3}{8}$ " away from the spine.

Hinge scores  $\frac{3}{8}$ " from spine

Inside cover



Bleed into spine  $\frac{1}{16}$ "

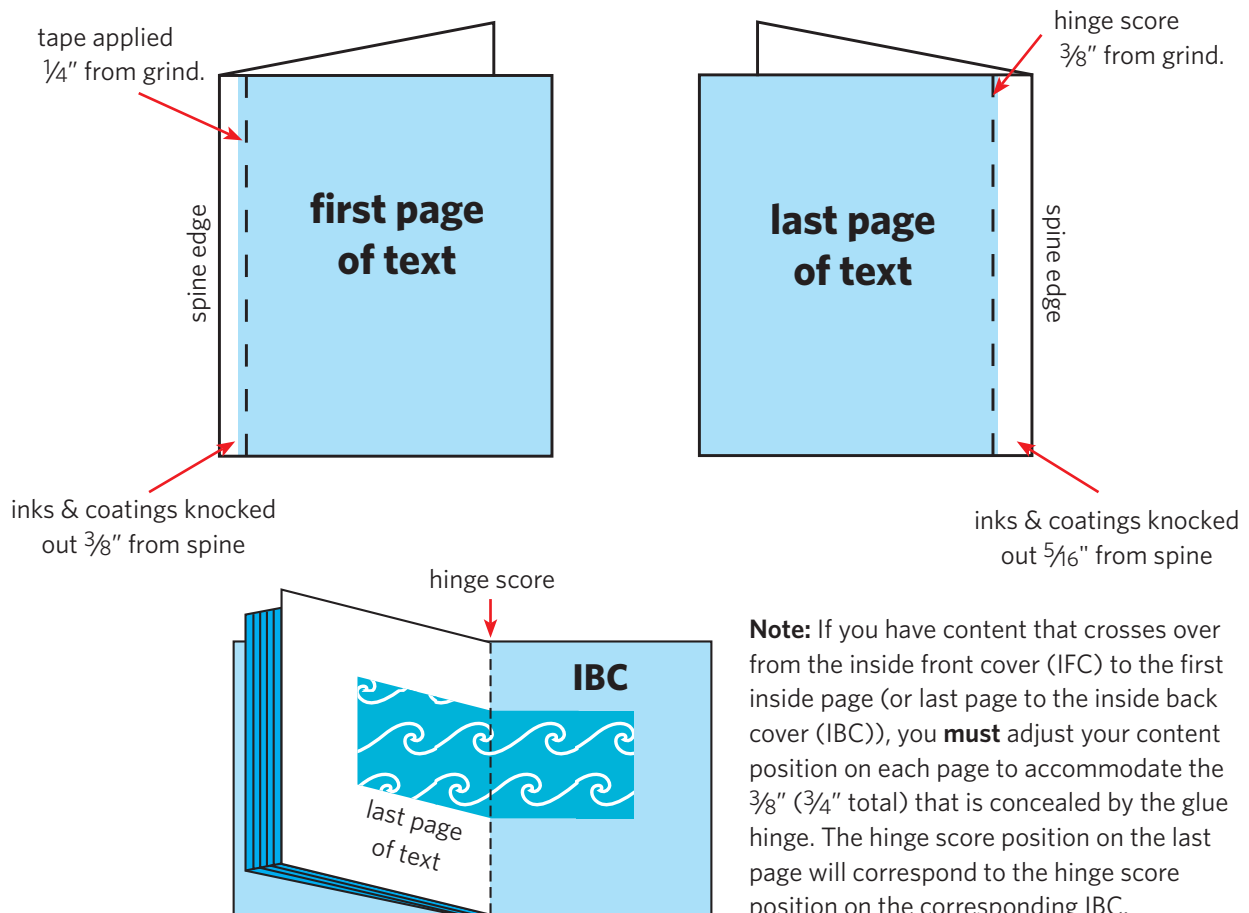


All inks and coatings must be knocked out from the inside spine, plus  $\frac{1}{16}$ " on either side, so the glue can properly adhere to the paper.

# Page Construction

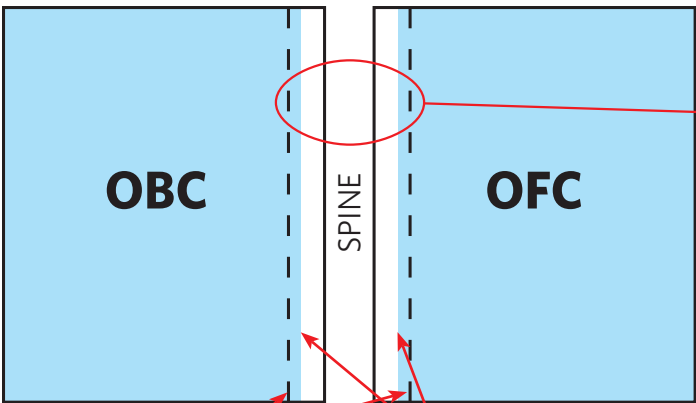
## Hinge Score for Swiss Bind Books with Detached Covers – First & Last Pages

The first & last text pages of a perfect bound book must also have an allowance for the application of tape to the book block. Tape is applied  $\frac{1}{4}$ " from the spine edge for the first page. Tape is applied  $\frac{3}{8}$ " away from the spine edge for the last page. Inks & coatings must be knocked out  $\frac{5}{16}$ " away from the spine edge.

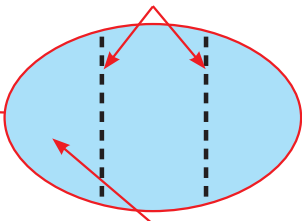


# Hinge Score for Swiss Bind Books - Covers

Outside cover – built as a “printer’s spread” with accurate spine width  
(Contact your Sales Representative to obtain this information).



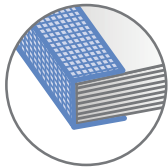
Add score marks at the spine.



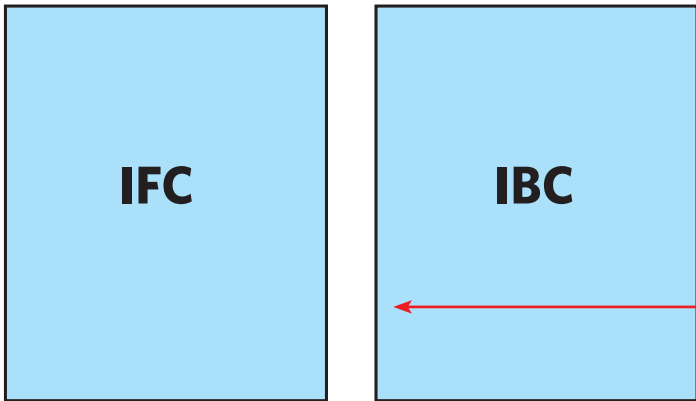
Add hinge score mark  $\frac{3}{8}$ " away from the spine.

Position of cloth lining  $\frac{1}{4}$ " from spine

Knock-out ink  $\frac{3}{16}$ " away from the spine, so the glue can properly adhere to the paper.



Inside cover

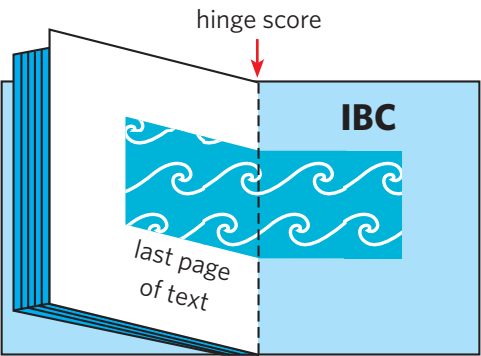
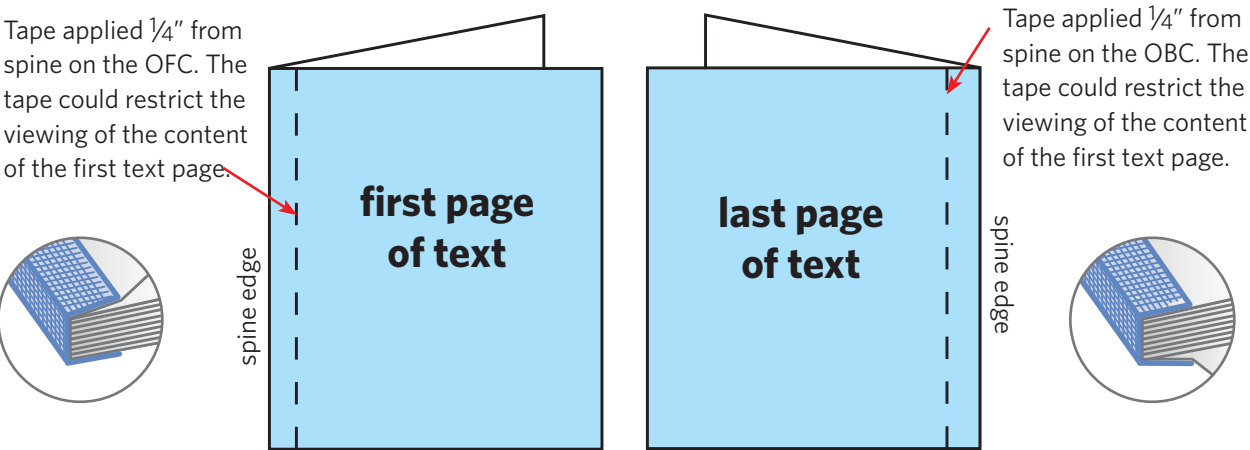


Full image area. No requirements for knock-outs.



### Hinge Score for Swiss Bind Books – First & Last Pages

The first & last text pages of a perfect bound book should have an allowance for the application of tape to the book block. Tape is applied 1/4" from the spine edge to the OFC and also to the OBC. The stiffness of the tape could restrict the opening of the book. Depending on design, the crossovers may need adjustment.



**Note:** If you have content that crosses over from the inside front cover (IFC) to the first inside page (or last page to the inside back cover (IBC)), you **must** adjust your content position on each page to accommodate the 1/4" (1/2" total) that is concealed by the tape.

# Page Construction

## Designing for Perfect Binding

When creating a project for a perfect bound book, extra consideration needs to be taken.

### Content Placed Across the Spine

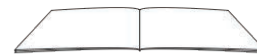
Be aware that the content placed across the spine will be compromised/lost by the spine pinch of the left and right-hand pages into the spine. Therefore, avoid placing text or critical elements of an image across the spine.

### Pushing Out Pages

This technique is used to minimize the spine pinch when text flow or image placement with critical elements across the spine cannot be avoided.

In this case it is recommended to split these spreads into single pages and push the content on each side away from the spine. There is no exact science how to calculate an accurate distance but 0.06" – 0.07" are amounts that have been used with success. (Depending on page count, weight of stock and where the spreads appear in the publication).

Our production workflow does not automatically take care of these alterations, it is the responsibility of the designer. Please ask your account representative for an estimate if you would like us to handle the task of pushing out pages.



Saddle Stitched



Perfect Bound

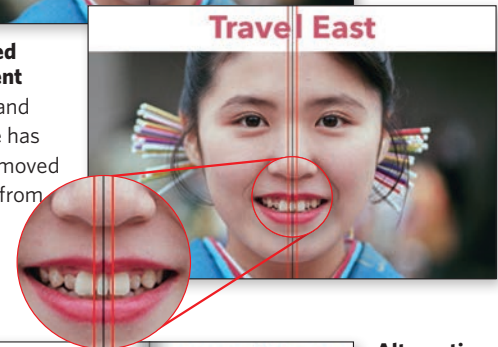


#### Poor Placement

Type and image will get caught in the Spine Pinch providing an unusual appearance

#### Pushed Content

Type and image has been moved away from the spine



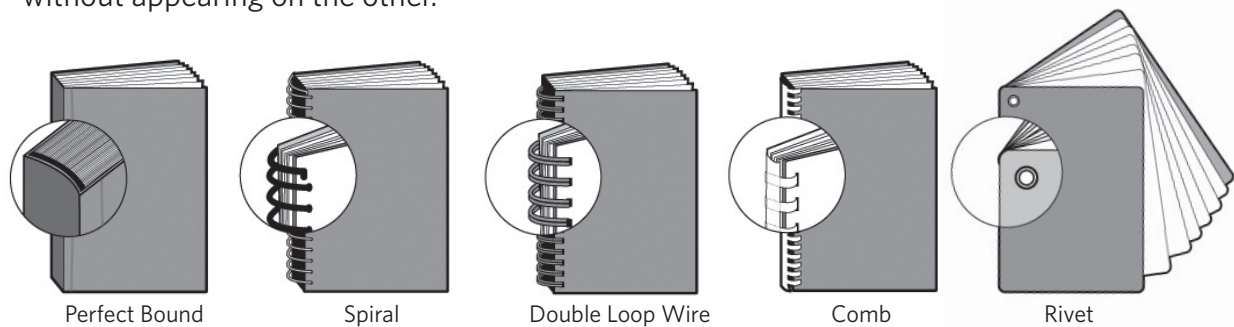
#### Alternative Layout

Consider other options for your page design

# Page Construction

## Splitting Pages to Create Gutter Bleed

For both perfect bound and spiral type bound binding styles, any graphic element that extends to the trim at the gutter must be extended to include bleed. To allow this, the two pages in the spread must be separated so that bleed can be extended on one page without appearing on the other.

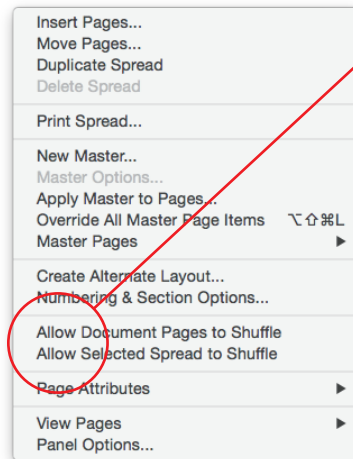


The pages in this spread must be split apart to allow bleed into the spine area for the images on the right-hand page.

# Page Construction

## Splitting Pages to Create Gutter Bleed (continued)

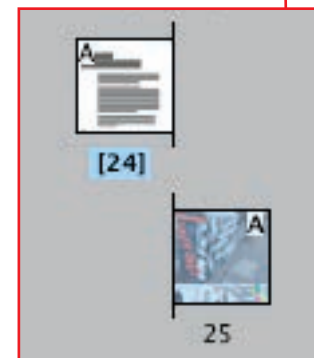
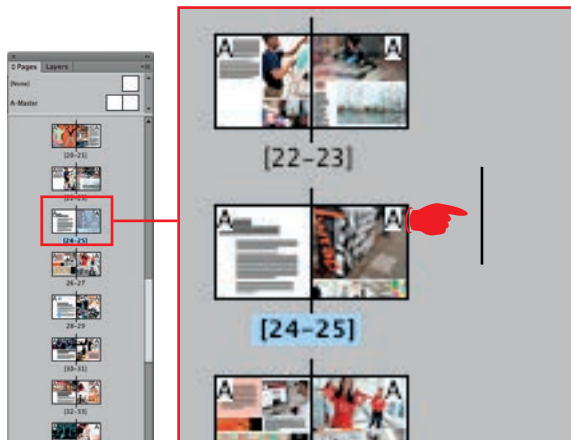
### Method for InDesign



1. In the Page Layout palette, click on the pop-out menu - make sure that "Allow Document Pages To Shuffle," "Allow Selected Spread To Shuffle" are NOT checked.

2. In the Page Layout palette, click and drag the page you want to split apart to the right - until you see the solid vertical line appear. Let go, and your pages will be split apart without the left and right attributes of the page being affected.

Bleeds can now be extended past the spine. *There is no need to pull pages apart if an item crosses over the spine.*

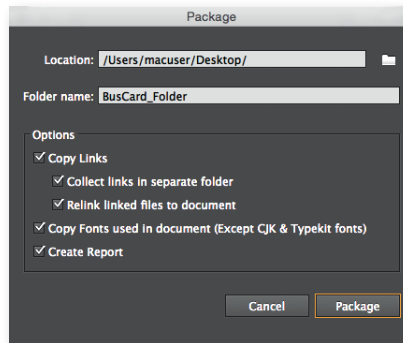
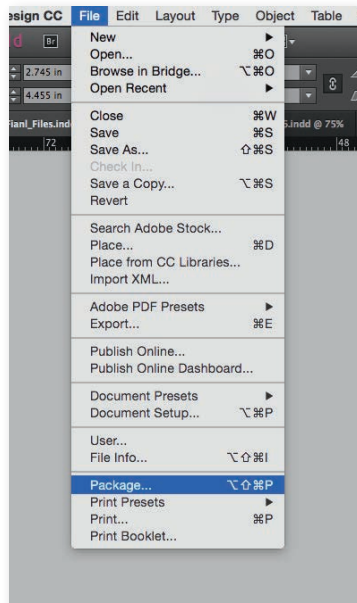
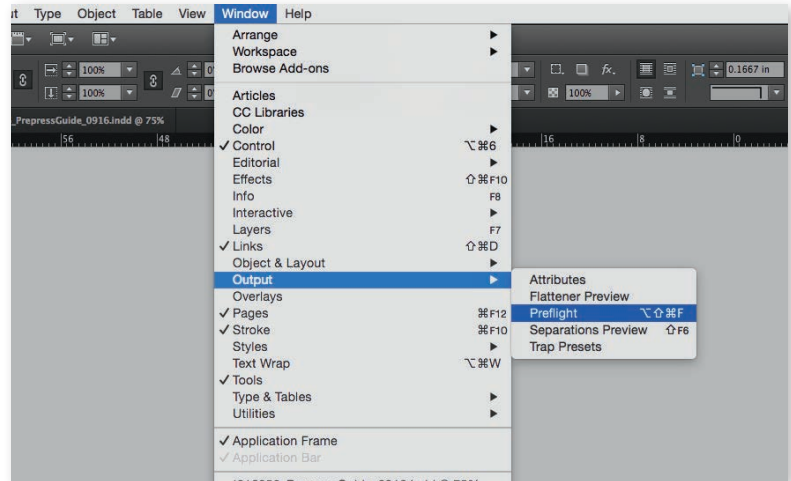


- A short video on splitting pages can be found here: [www.hemlock.com/learning\\_centre/designer\\_toolbox](http://www.hemlock.com/learning_centre/designer_toolbox)

# Page Construction

## Preflight (InDesign)

InDesign features a Preflight function (**Window > Output > Preflight**) that will allow you to set up parameters and have your file scanned for potential errors prior to packaging files to be printed.



Illustrator



InDesign

## Package (InDesign/Illustrator)

Both, InDesign and Illustrator features a Package function (**File > Package**) that will gather your file along with all required links and fonts.

# Page Construction

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## Page Production Reference Guide

- **Page geometry:**
  - Trim size of document should be the same as the trim size of the page (avoid manual trim marks on oversized pages)
  - One page per document page (avoid creating spreads on a single page)
  - For Illustrator page production: one page per document (avoid creating layers for multiple pages or scattering multiple pages in one document)
  - Avoid re-assembling into printer spreads (except for 4-page projects and covers)
- **Bleeds:**
  - Minimum  $\frac{1}{8}$ " at all trim edges, including into the spine for perfect-bound and wire-o projects
- **Dielines:**
  - Create with 1 point rule weight
  - Define as a spot colour ("Dieline")
  - Solid lines for cuts, dashed lines for folds, dash dot dash for perforations
  - Place on a separate layer in the layout document
- **Short panels:**
  - Create panels that fold in  $\frac{1}{16}$ " -  $\frac{1}{8}$ " shorter than other panels
  - For perfect-bound projects, fold-in panels should be  $\frac{3}{8}$ " -  $\frac{1}{2}$ " shorter than other pages
- **Varnishes:**
  - Define as a spot colour, e.g., "Gloss Varnish"
  - Place on a separate layer in the layout document
  - Continuous tone objects - save as Greyscale or Bitmap tiff and colourize in layout application

# Page Construction

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- **Emboss, Deboss, Foils, Laser-cuts:**
  - Define as spot colours
  - Place on separate layers in layout document
  - Best results with vector artwork
- **Versioning:**
  - Create each version as a separate layer, all versions in one document
  - Place all common elements on a single base art layer
- **Boost your blacks:**
  - Add 50% Cyan, 40% Magenta, 40% Yellow to large solid black objects for a denser appearance on press (avoid adding boosts to black text smaller than 18 point)
- **Define your colours**
  - Delete all unused colours from your document palette
  - Do not leave colours defined as spots if they will be output as process
  - Spot colours (that are intended to separate as process) that interact with transparency will not separate properly
- **CMYK colour tint:**
  - Avoid creating colours containing 4 screen tints (e.g. 8C 56M 87Y 4K). Try to create the colour with a maximum of 3 screen tints, or make sure that one of the values is 100%
- **Double hits:**
  - For large solid areas to be printed with special (e.g. Pantone) ink, consider creating two hits for optimum appearance and performance on press.

# Page Construction

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## Page Production Reference Guide (continued)

- **Revisions:**
  - If files have to be re-supplied, make sure to indicate what has changed. This allows us to choose how best to implement the revisions into our workflow and to avoid incurring unnecessary costs.
  - Rename files to reflect it has been revised (e.g. 0916\_pages\_r1)
- **File name length:**
  - Avoid file names longer than 31 characters (including extension); our system will truncate the file name
- **Edit, Create, then Combine**
  - For best results, **edit** the images in Photoshop, **create** your logos and graphics as vector art in Illustrator, then **combine** with text in InDesign.

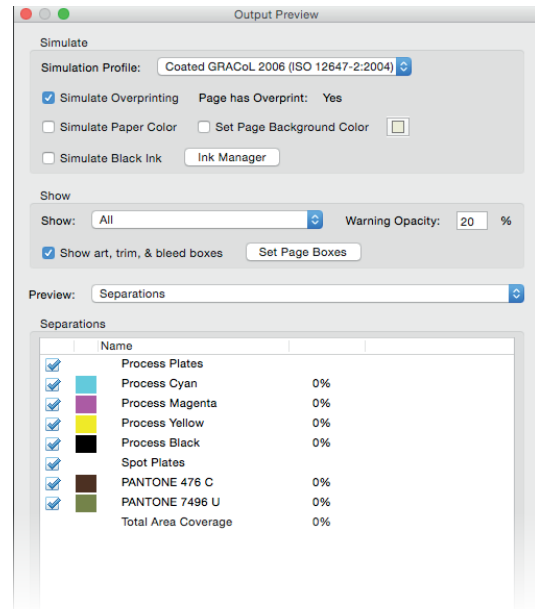


# Page Construction

## Acrobat

When generating a print ready PDF, always use Acrobat to review the pages before submitting your files to the print provider.

- Check bleed and trim marks
- Confirm text flow
- Use the Acrobat tools:
  - **Output Preview** to check for proper colour separations
  - **Preflight** to check for low resolution images.



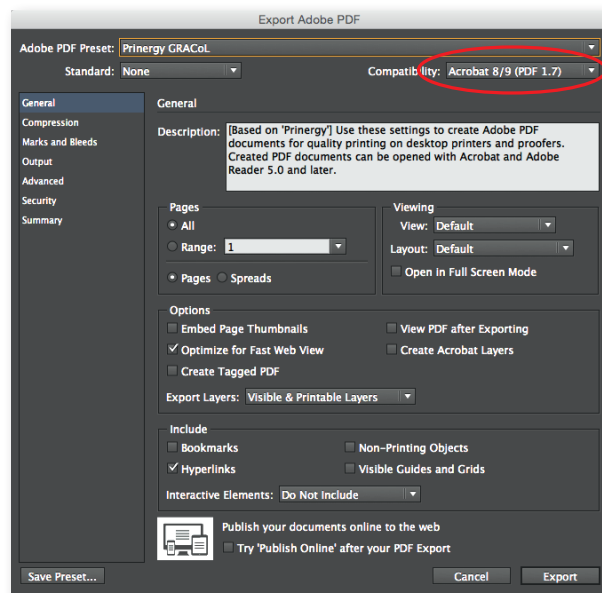
The Adobe "Creative Suite Printing Guide" is an excellent overview of Prepress practices and is available for download at: [www.hemlock.com/prepare-files](http://www.hemlock.com/prepare-files)



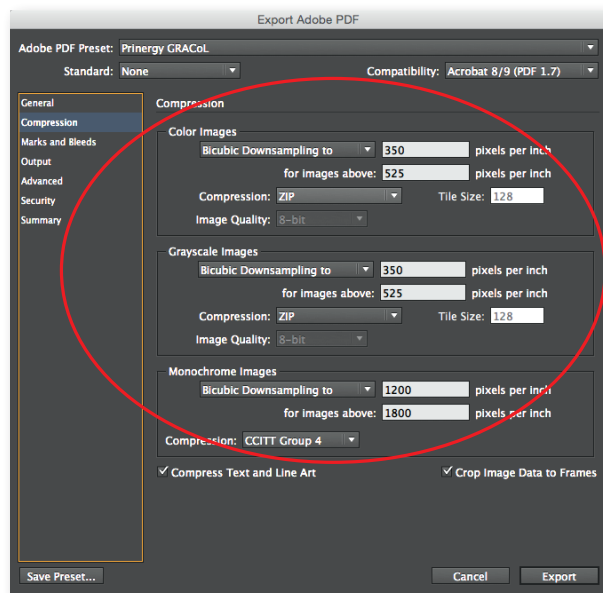
# PDF Export

## Exporting Print Ready PDF Pages from InDesign

In the pull down menu, choose **File > Export**, a window will ask where to save the PDF file. Save the file to the appropriate location. An “Export Adobe PDF” window will open with options to generate a PDF with optimal print compliance. The screen shots below illustrate the settings required for offset and Hemlock’s digital printing process.



Select **Acrobat 8/9 (PDF 1.7)** under **Compatibility**. This setting allows for transparency



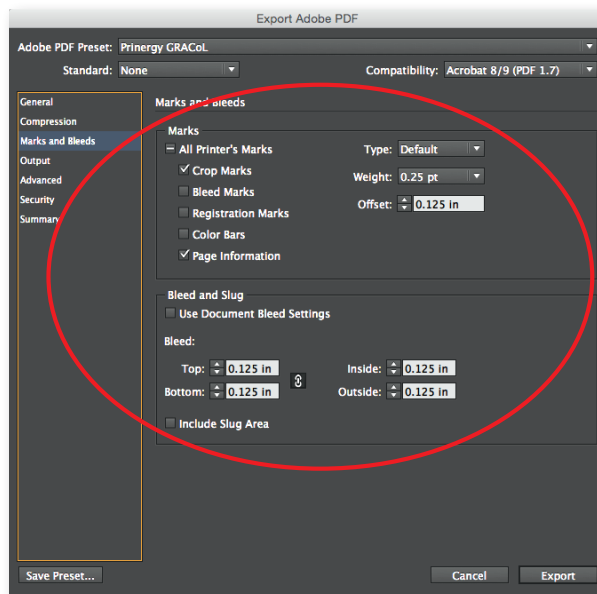
Set your compression to **ZIP** to avoid loss of image quality

- The pdf export settings are available for download at: [www.hemlock.com/prepare-files](http://www.hemlock.com/prepare-files)

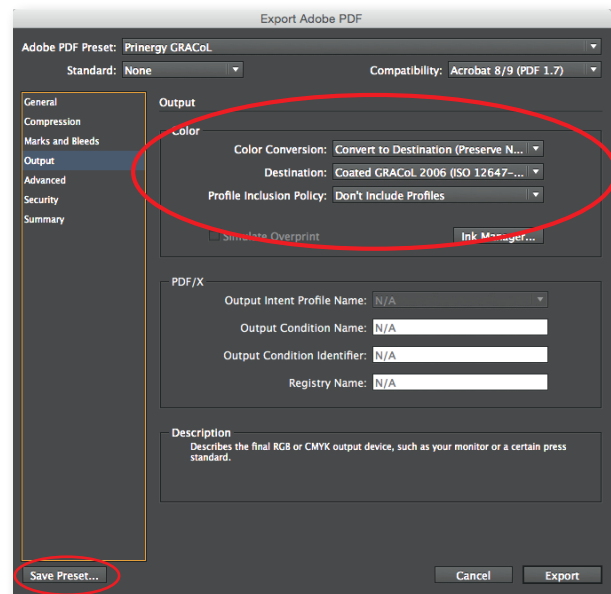
# PDF Export

Prior to sending the PDF to your print provider, it is advised to view the exported PDF in Acrobat with the Output Preview tool activated. This will provide you with a final look at your PDF to confirm:

- Correct Bleed
- Correct Trim marks
- Color Break
- Correct Page(s) / Page Range



Set your **Marks and Bleeds** to 0.125"



**Save Preset**  
for future use.

Set your Color Conversion

# File Upload

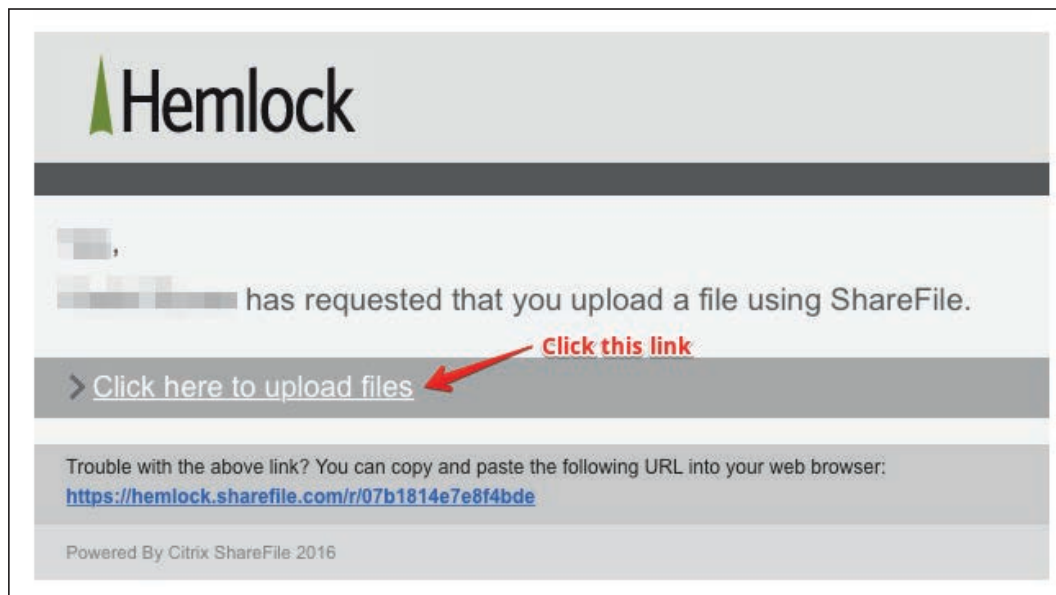
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## File Upload System

Hemlock uses Citrix Sharefile for file transfers. This enterprise solution is hosted at a secure off-site data centre. Sharefile is a great alternative to other cloud hosted file transfer services such as Dropbox, which are usually hosted outside Canada. Enterprise IT organizations frequently block Dropbox. Hemlock's file transfer system has no limits on file upload sizes and provides a secure encrypted file transfer in transit and at rest.

### Step 1:

Ask your sales representative for an upload request. Once a request for a file upload is received, an email will be sent with a link to our upload page.



# File Upload

## Step 2:

The default upload method for sending files is to simply drag and drop your files on the web upload page.

### Upload Files

To upload a file, click Choose Files. Select files from the pop-up menu, or drag files from your computer on to the box. To upload multiple files at once, hold down the Shift or Control key as you select files.

**Note:** To upload a folder, click [here](#) for instructions.

If you have trouble uploading files, you can try using [Flash uploader](#) or [Standard Uploader](#).

Choose Files

Clear All

Drag and drop your file.  
Zip compress folders if you  
want to upload more than 10 files

DRAG FILES HERE

Upload Files

Once your file is received, a confirmation email will be sent back to you.



# Wide Format Printing

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## **File Preparation for Wide Format Printing**

The page set-up requirements and the handling of fonts and Pantone Colours are different than what is commonly used in an offset or digital print environment. Please read this file preparation guide to learn how to submit files for a Wide Format print project. Following these few simple steps will ensure a trouble-free “Preflight” process and a timely delivery of your order. It will also reduce the risk of incurring additional costs.

For more details about various file preparation topics, please refer to the preceding pages in this “File Preparation Guide”. Please note that not all sections are applicable to Wide Format printing.

# Wide Format Printing

## Document Set-Up

When starting with a print project you must ensure that the following is entered in the **New Document** set-up menu correctly:

- **Document size = Trim**

It is recommended to set-up your display document at 100% (printed size). This will allow you to confirm the final input resolution of placed images (see “Image Handling” on page 48) and the required bleed allowances.

The bleed requirement for Wide Format work is 0.25" minimum all sides except for large and/or hemmed banners where the Bleed requirement is 0.5" minimum all sides (1" bleed is preferred).

Please verify that all images, graphics and flat tints meet the bleed requirements as noted above.

Bleed” is the extra image that is added to your design to make sure there is no white border when the job is trimmed or folded for hemmed edges.

The reason for the relatively large amount of bleed requirement is the challenge of handling large materials in the printing and finishing machines as well as the less than perfect front-to-back registration in the Wide Format printing process.

New Document

Document Preset: [Custom]

Intent: Print

Number of Pages: 1

Start Page #: 1

Page Size: [Custom]

Width: 24 in

Height: 48 in

Orientation: Portrait

Columns

Number: 1

Gutter: 0.1667 in

Margins

Top: 0.5 in

Bottom: 0.5 in

Left: 0.5 in

Right: 0.5 in

Bleed and Slug

	Top	Bottom	Left	Right
Bleed:	1 in	1 in	1 in	1 in
Slug:	0 in	0 in	0 in	0 in

Preview Cancel OK



# Wide Format Printing

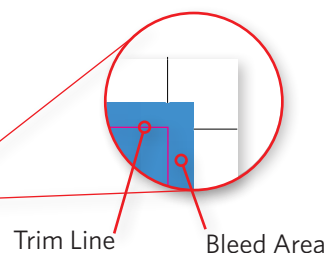
## Scaling Files

If display documents have to be created at a size smaller than the final output size, it is advisable to create the document at a 50% or 25% scale. This will allow for easy calculations of sufficient image resolution and bleed allowances. See examples on the next page.

### Example for 50% Scale

Printed size 24ft x 12ft

Document set-up 12ft x 6ft (144" x 72")



#### Image Resolution:

Document size = 300ppi

Printed size = 150ppi

#### Bleed Amount:

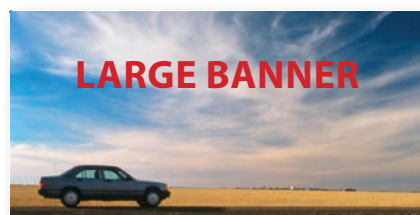
Document size = .25"

Printed size = .5"

### Example for 25% Scale

Printed size 24ft x 12ft

Document set-up 6ft x 3ft (72" x 36")



#### Image Resolution:

Document size = 600ppi

Printed size = 150ppi

#### Bleed Amount:

Document size = .125"

Printed size = .5"

# Wide Format Printing

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## Image Handling

Placed RGB images will be converted to CMYK formatted images in the PDF export process (see **Exporting Print-Ready PDF from InDesign for Wide Format Printing** on page 52 & 53). It is advisable that designers look at the CMYK formatted images in the PDF before you send the files to the printer.

Our colour managed workflow is based on North American industry standards.

Please ensure that the placed images contain enough resolution. It is advisable to print images with a minimum of 100 ppi (pixels per inch) at final size.

If your Wide Format project is colour critical, please ask your Sales Representative to include a printed proof in the estimate. A colour critical section of the job or a proof at reduced size can be provided for evaluation of image quality and colour.

## Black versus Rich Black

When designing a print project with process colours (CMYK) which have large areas of black, such as solid black backgrounds or large black type, it is often desirable to use a CMY boost under the black. A boosted black appears blacker. Hemlock's preferred **Rich Black** is 50% Cyan, 40% Magenta, 40% Yellow, 100% Black. Name the boosted black swatch "Rich Black", or name swatch with colour values.



100% black



50% Cyan  
40% Magenta  
40% Yellow  
100% Black

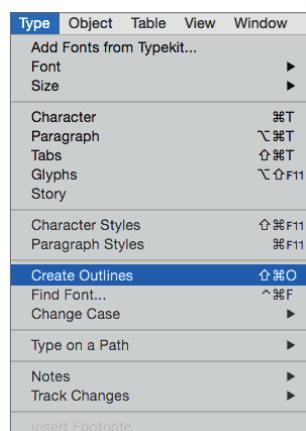
No **Rich Black** for type please!

# Wide Format Printing

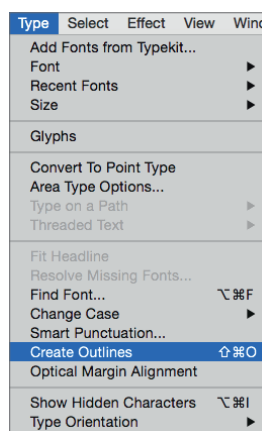
## Fonts

**Important:** For Wide Format printing projects it is recommended to outline all fonts. This will allow for more stable file processing.

Choose **Type > Create Outlines**



InDesign



Illustrator

If fonts are being coloured Black, the file should be set-up to 100% Black only.

# Wide Format Printing

## PANTONE (Spot) Colours

Please note: Pantone colours will be converted to CMYK since the Wide Format printing process will not accommodate Pantone Spot Colours. If a Pantone Spot Colour match is important for your Wide Format printing project, please ask your Sales Representative for an estimate that includes a printed test or proof of the file before printing the live project.

## White Ink Set-Up

Please note: The white ink channel in Wide Format printing serves as a block-out for CMYK printing on transparent substrates. Two scenarios are possible:

**Spot White:** Only certain parts of the printed area are to be blocked out with white ink (non-transparent areas). In this case a Spot Colour channel must be set-up in the document and named **Spot White**. The ink density is set to 100%. All Spot White areas must be **Set to Overprint** prior to submitting files for output.

**Flood White:** The entire print area is to be blocked out with white ink. In this case no special file preparation is required but a **Flood White** must be specified/requested in the print order.



Example of Spot White

Clear film  
mounted to  
grey marble



Example of Flood White

# Wide Format Printing

## Document Set-Up for Projects with Dielines or Contour Cutlines

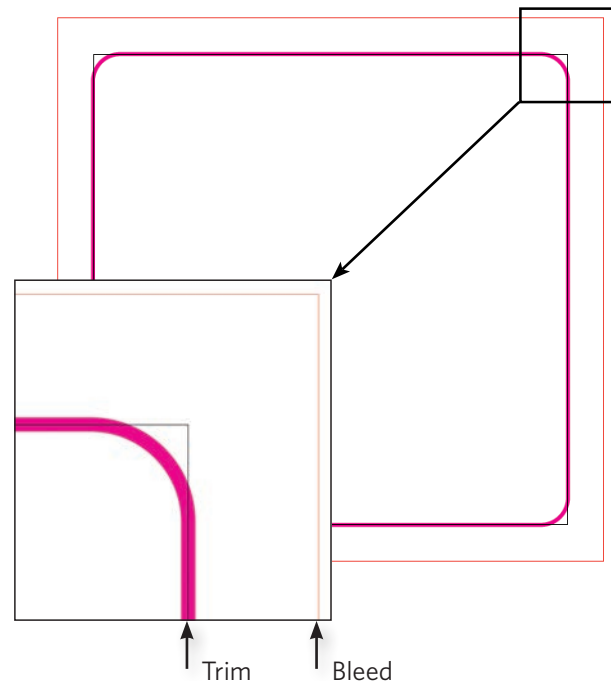
When your project will be diecut, make the trim size of your document the same dimensions as the finished size after diecutting. When creating the dieline, create a swatch named **Dieline** that is defined as a spot colour. Give the dieline a stroke width of 1 point. The center of the stroke is the position of the cut, so the dieline stroke should center on the trim size of the document when positioning the dieline artwork. Dieline areas must be **Set to Overprint** prior to submitting files for output.

If creases are required, then a separate **Crease** Spot Color needs to be defined.

### Dieline Size = Trim Size.

Be sure to set bleed to at least .25" on all sizes.

solid lines		= cut
dashed lines		= score / fold
dash dot dash		= perforations



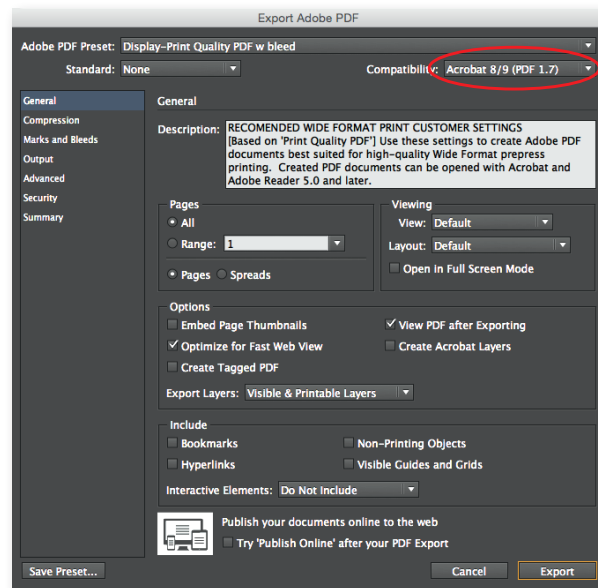
# Wide Format Printing

## File Format

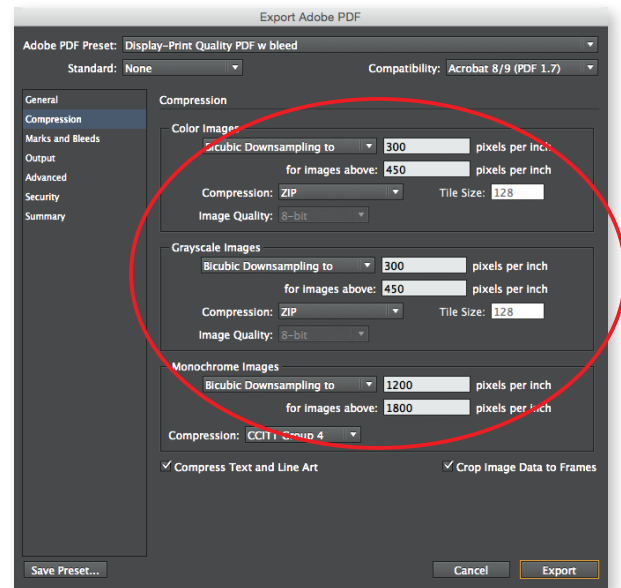
A Wide Format print estimate is based on submitting print-ready PDF to Hemlock's specifications. Please refer to the next paragraph.

## Exporting Print-Ready PDF Documents for Wide Format Printing (InDesign)

In the pull-down menu, choose **File > Export**, a window will ask where to save the PDF file. Save the file to the appropriate location. An "Export Adobe PDF" window will open with options to generate a PDF with optimal print compliance. The screen shots below illustrate the settings required for the Wide Format printing process.



Select **Acrobat 8/9 (PDF 1.7)** under **Compatibility**. This setting allows for transparency



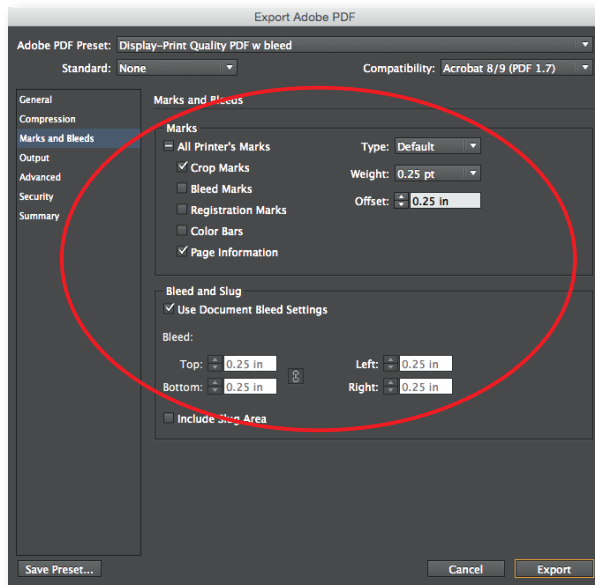
Set your compression to **ZIP** to avoid loss of image quality

- The pdf export settings are available for download at: [pdf.hemlock.com](http://pdf.hemlock.com)

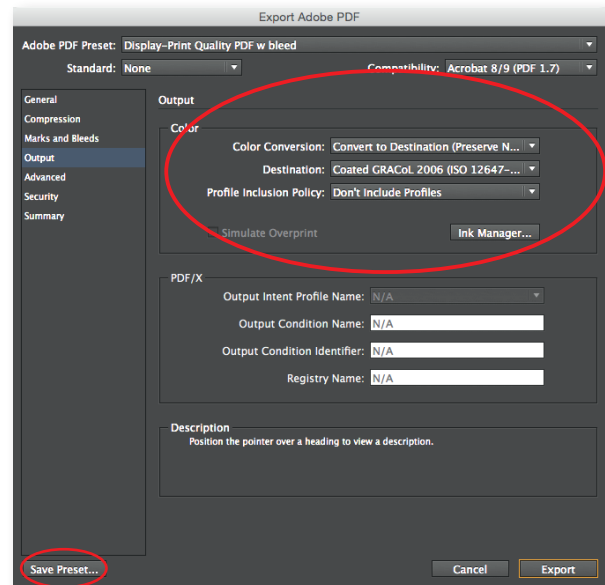
# Wide Format Printing

Prior to sending the PDF to your print provider, it is advised to view the exported PDF in Acrobat with the Output Preview tool activated. This will provide you with a final look at your PDF to confirm:

- Correct amount of Bleed
- Trim marks must be outside of Bleed Margins
- No tags or registration marks inside the bleed margins
- CMYK only



Set your **Marks and Bleeds** to 0.25"



**Save Preset**  
for future use.

Set your Color Conversion

With the correct PDF Export settings, the above criteria should be taken care of.

# File Upload

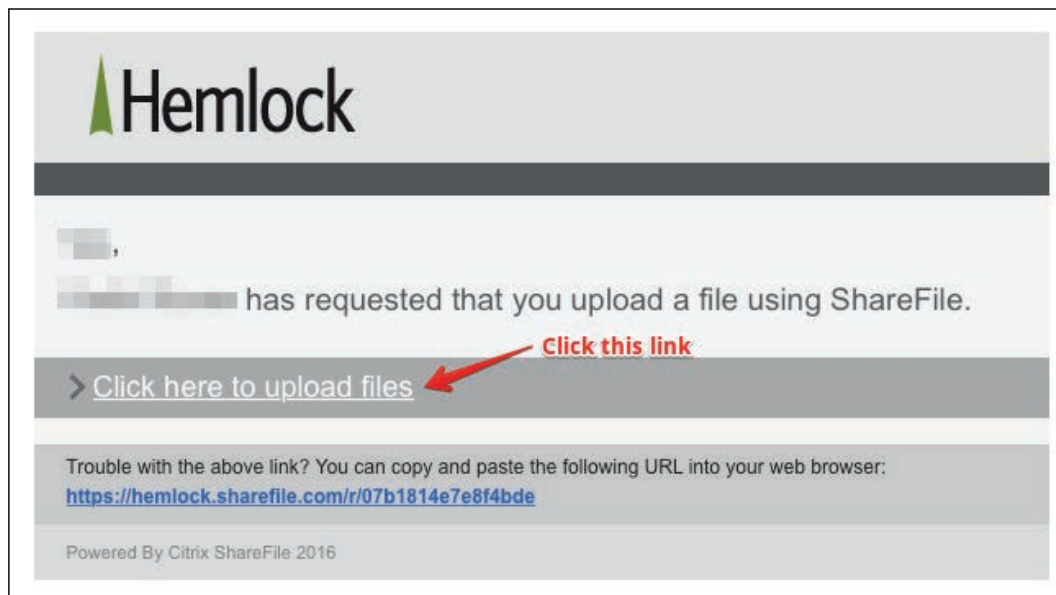
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## File Upload System for Wide Format Printing

Hemlock uses Citrix Sharefile for file transfers. This enterprise solution is hosted at a secure off-site data centre. Sharefile is a great alternative to other cloud hosted file transfer services such as Dropbox, which are usually hosted outside Canada. Enterprise IT organizations frequently block Dropbox. Hemlock's file transfer system has no limits on file upload sizes and provides a secure encrypted file transfer in transit and at rest.

### Step 1:

Ask your sales representative for an upload request. Once a request for a file upload is received, an email will be sent with a link to our upload page.





# File Upload

## Step 2:

The default upload method for sending files is to simply drag and drop your files on the web upload page.

### Upload Files

To upload a file, click Choose Files. Select files from the pop-up menu, or drag files from your computer on to the box. To upload multiple files at once, hold down the Shift or Control key as you select files.

**Note:** To upload a folder, click [here](#) for instructions.

If you have trouble uploading files, you can try using [Flash uploader](#) or [Standard Uploader](#).

Choose Files

Clear All

Drag and drop your file.  
Zip compress folders if you  
want to upload more than 10 files

DRAG FILES HERE

Upload Files

Once your file is received, a confirmation email will be sent back to you.

## Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.