Design and File Preparation Guidelines

xerox™

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Introduction

When you work with print providers who have a Xerox® iGen® 5 Press with the 5th print station, you have the opportunity to create designs that go beyond CMYK.

You can offer your clients on-brand spot colors using Orange, Green, or Blue inks that extend the press's color gamut, as well as design digital print enhancements using Xerox® Fluorescent Yellow, White, and Clear Dry Inks, all without sacrificing digital print's turnaround time and cost-effectiveness.

This guide will walk you through several ways to design for the 5th print station. Best practices for file preparation are included to help ensure print results match your design intent.

All steps included in this guide assume a working knowledge of Adobe® Creative Suite applications.

Always work with your print provider on specific file attributes and PDF export settings.

CMYK Dry Inks

Orange

Green

Blue

Fluorescent Yellow

White

Clear

5th Print Station

Image Transfer Point
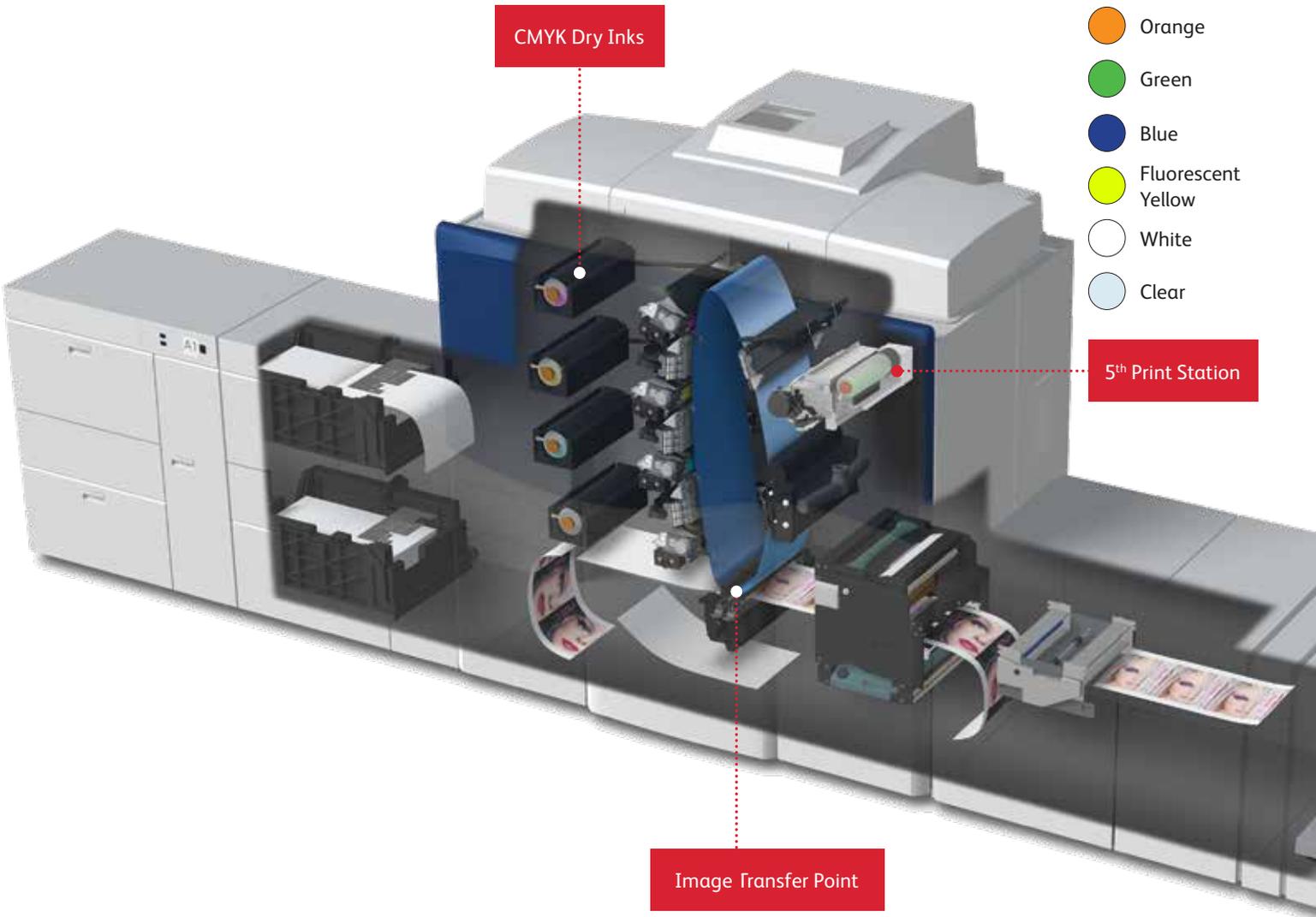
The 5th print station process.

The 5th print station functions differently depending on the specific ink it holds and how that ink is used within a design.

When the 5th print station is used with Orange, Green, or Blue (gamut-extending colors), that color will layer with the CMYK Dry Inks to extend the gamut of the press and prints to your paper in a single pass.

Fluorescent Yellow, White, and Clear Dry Inks, however, are used for different purposes (spot and photo enhancements) and do not extend the gamut of the press. This means their printing process is somewhat different.

Helpful terms:

Passes – The number of times a sheet of paper or other media runs through the imaging transfer point.

Ink Layers – The number of hits of ink that are required to meet the desired print characteristics for each job.

Single pass vs. Multipass.

Single Pass

Designs that place Orange, Green, Blue, Fluorescent Yellow, or Clear Dry Ink elements as a spot or next to CMYK will print in one single pass.

Designs that place Orange, Green, Blue, or Fluorescent Yellow Dry Ink elements over CMYK will print in one single pass.

Designs that use White only as a spot will print in one single pass.

White Dry Ink
(single pass)

Media

Orange Dry Ink
(single pass)

CMYK
(single pass)
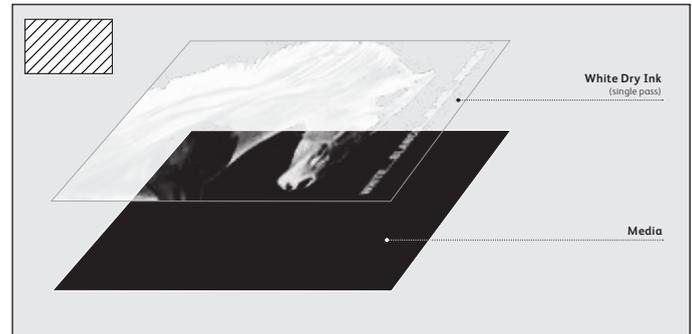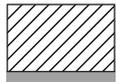
Media

Spot
5th Color Only   Next to CMYK

Over CMYK

Media
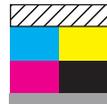
Multipass

When a White element is next to, over, or under CMYK*in a design, the ink will print in a separate pass from your four color process elements. This separate pass is invisible to the casual observer as it's happening automatically within the press, but it is important to understand.

Due to slight paper movement between the passes, small adjustments should be made to graphics calling for White Dry Ink to ensure the final printed product matches your design intent. Those adjustments will be covered in the following pages.

When White is specified as a double hit** over or under CMYK, the ink will print in a separate pass.
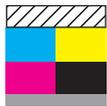
CMYK
(second pass)

White Dry Ink
(first pass)

Media

CMYK
(third pass)

White Dry Ink
(second pass - optional)

White Dry Ink
(first pass)

Media

Over CMYK
Single Hit*   Double Hit**

Under CMYK
Single Hit*   Double Hit**

Media

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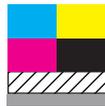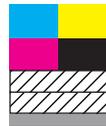
*   Automatic Multipass mode required.
** Manual mode required. This requires a second file for the second hit.

Be spot-on with brand colors.

The need to accurately represent your clients' brand colors can often be the determining factor when deciding between offset and digital. Now, the iGen® 5 Press can be your go-to press.

An optional 5th color extends the iGen® 5 Press gamut to put more of your clients' brand colors in reach.

By adding Orange, Green, or Blue to CMYK Dry Inks in an iGen® 5 Press, more than 93 % of the PANTONE® PLUS swatch book can be accurately reproduced. This makes digital print a highly relevant option for jobs that need fast, cost-effective turnaround— in addition to on-brand color.
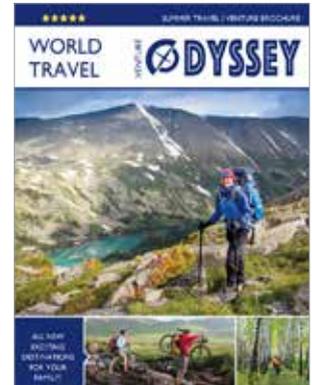
Using the 5th color capability is easy. Once you have selected a PANTONE® color, you can quickly check to see if it would benefit from the addition of Orange, Green, or Blue by using the iGen® 5 Press Gamut Extension Tool: **xerox.com/gamut**.

Simply enter your PANTONE® PLUS color and the tool will let you know if it can be accurately represented by CMYK, or if it would benefit from the addition of a 5th color.
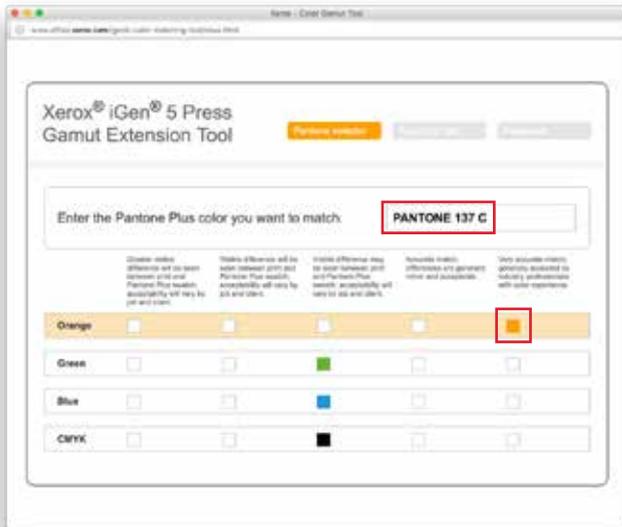
In this case, with the addition of Orange, the specified PANTONE® color would be a "very accurate match."
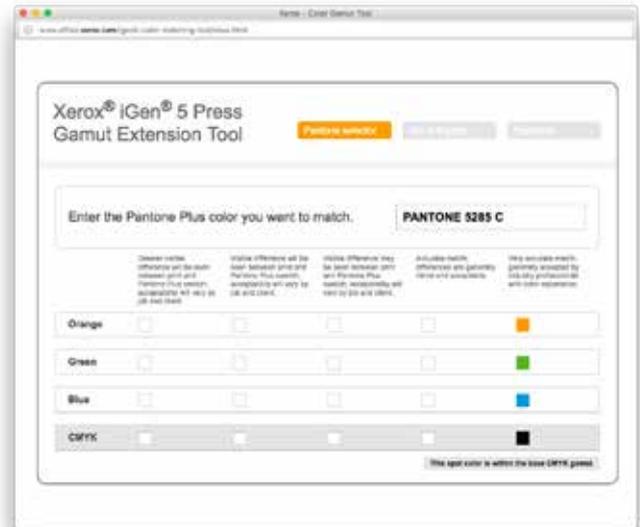
While a 5th color could be used to match this desired PANTONE® color, CMYK alone will also provide a "very accurate match."

Using 5th color in your files.

Once you know your PANTONE® PLUS color will benefit from Orange, Green, or Blue, you simply need to define it as a Spot color in your layout file. Your print provider—and the iGen® 5 Press—will do the rest.

Determine whether your PANTONE® selection will benefit from a 5th color using the Gamut Extension Tool: **xerox.com/gamut.**

1 In Adobe® InDesign®, add the desired PANTONE® color to your file. Designate it as a **spot color.**

2 Fill your shape with the new PANTONE® color swatch.

Save your file and export as a high-resolution Adobe® PDF using the instructions on the next page.

When you hand your job off for production, be sure to tell your print provider to run it with a 5th color, and to ask for a press proof. This will help ensure the result matches your intent.

Preparing PDF files for printing.

Exporting as a high-res PDF from Adobe® InDesign®.
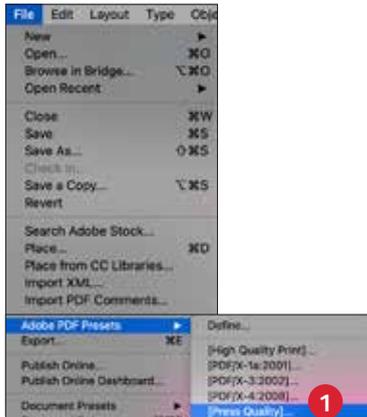
1 From the main menu, **select**: File > Adobe PDF Presets > **Press Quality**, and click **Save**.

2 **Select** General: Compatibility > and choose **Adobe® Acrobat® 7 or higher**.

3 On the lower-right side, check **Create Acrobat Layers**.
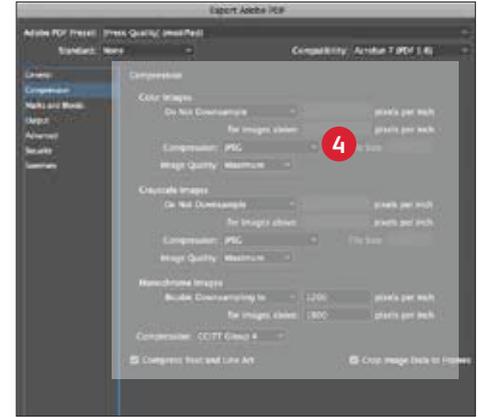
4 **Select** Compression: Color Images > **Do Not Downsample**.

Compression > JPEG, Image Quality > **Maximum**.

Choose the same for Grayscale Images. For Monochrome Images > **CCITT Group 4.**

Extend the gamut of your photos.

CMYK+ Orange

The gamut extension capability can boost the tonal range of your photographs beyond the CMYK gamut. Shown above is an example of an image that would benefit from Orange gamut extension.

A depiction of where the press would enhance the image with Orange Dry Ink.

NOTE: The gamut enhancement is enabled on the print job submission side and there is nothing a designer would have to do to prep a photograph other than using an image that would benefit from gamut extension. See page 13 for examples.

CMYK Only

PEGASUS COLOR PALETTE
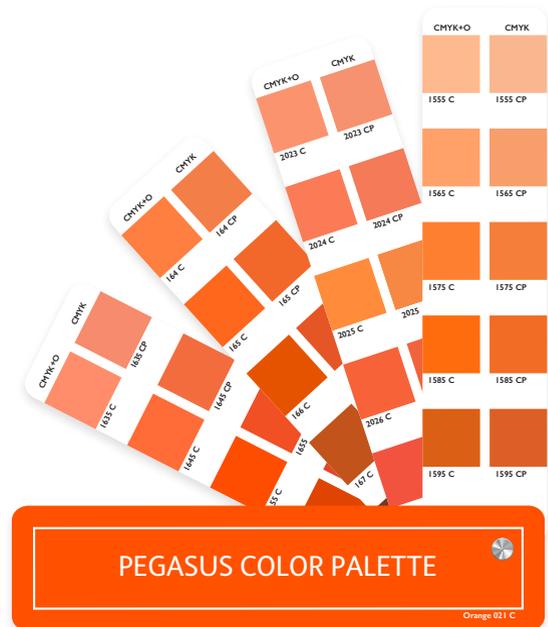
Each of the examples above **would benefit** from pushing the Orange gamut. They depict subjects or contain elements in the right color space, and that are already naturally bold, vivid, and attention-grabbing.

The examples above **would not benefit** from Orange gamut extension. Generally speaking, memory colors—or those we associate from life experience—should be left as close to natural as possible, unless being manipulated for creative or editorial purposes.

Similarly, the items shown here **would not benefit** from Orange gamut extension unless the designer intends to manipulate the color space and change the natural depiction of the scenes or objects.

Things to consider when selecting good images:

Objects or scenes inhabiting the correct color space and depicting an appropriate color palette—which could be made more vivid or striking without diminishing realism—are ideal candidates for gamut extension.

Unless it's for a specific artistic, creative, or editorial purpose, realistic depictions of items the viewer expects to see portrayed in a specific color (memory color) are not good candidates for gamut extension.

For example, a butterfly, garment, or item that is a vivid orange in nature would be enhanced by extending its orange gamut. An item or scene that is less vivid—or that appears dull, yellowish, or rusty-colored in real life—would not.

We've used CMYK+Orange here, but the same principles apply to Green and Blue.

Eye-stopping specialty effects with Fluorescent Yellow Dry Ink.

Go beyond neon colors to an ink that actually glows.

Fluorescent Yellow Dry Ink prints with a unique, high-visibility hue that captures attention and even fluoresces—or glows— under UV light. Use it for spots, floods, or photo enhancements.
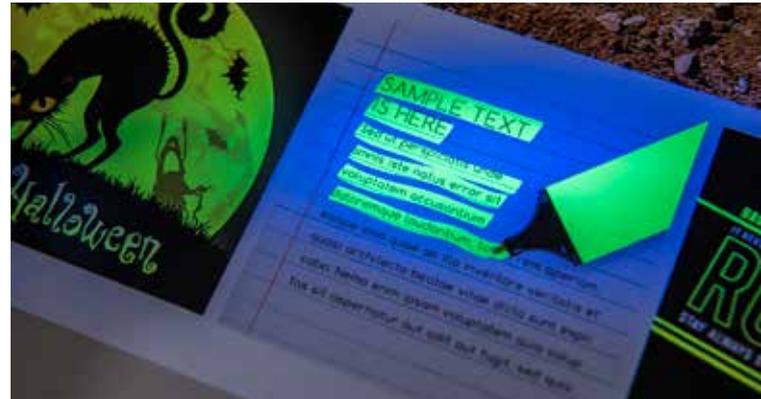
How to incorporate Fluorescent Yellow Dry Ink into your designs:

Spot
Fluorescent Yellow Only

Next to CMYK

Over CMYK
Single Hit

Media

15

Fluorescent Yellow can be printed **next to CMYK** as a spot or flood effect.


Fluorescent Yellow next to CMYK will make text and visual elements pop. In this example, it is used as a background flood along with heavy black text to create an attention-grabbing safety sign.

Single Pass Ink Layers

Fluorescent Yellow Dry Ink
(single pass)

CMYK
(single pass)

Media
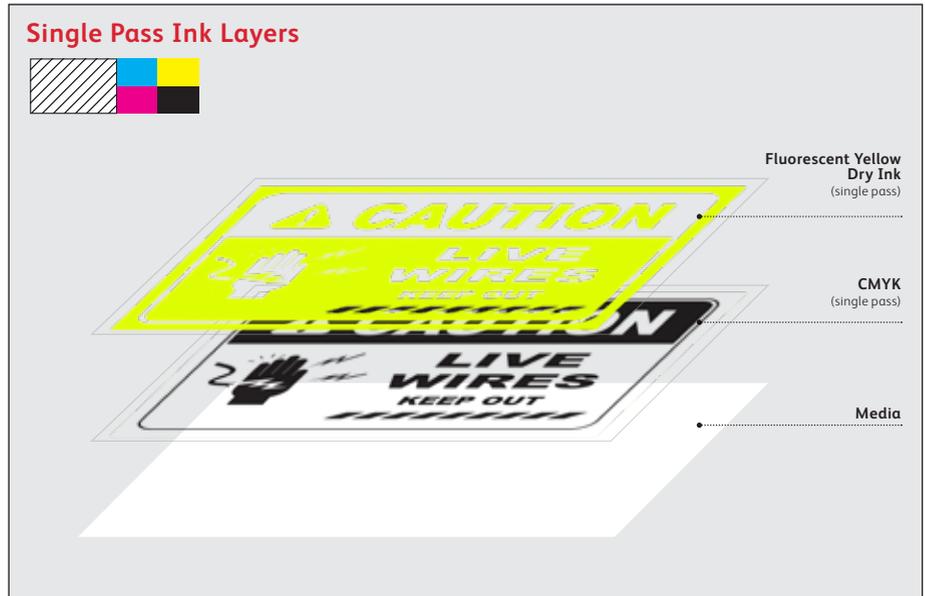
Fluorescent Yellow can also be printed **over CMYK** to enhance images and add more value to jobs.

Incorporate Fluorescent Yellow tints over lighter areas in a photo or graphic to add high-energy impact and creative flair.

Single Pass Ink Layers

Fluorescent Yellow Dry Ink
(single pass)

CMYK
(single pass)

Media
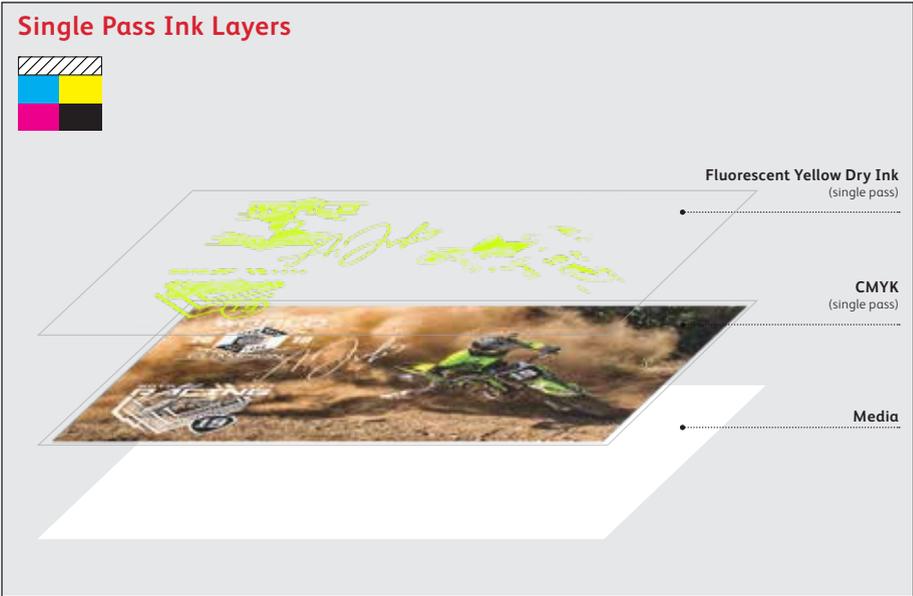
Get the most from Fluorescent Yellow Dry Ink.
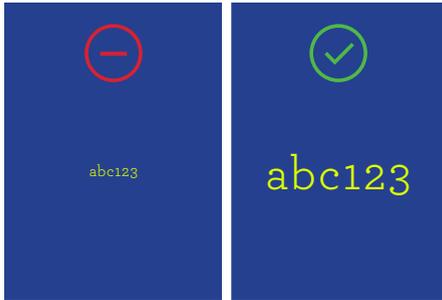
**Avoid serifs and small point text** with Fluorescent Yellow Dry Ink.

Avoid using Fluorescent Yellow for applications that will be exposed to direct sunlight. It is recommended to use it for indoor applications—not for outdoor use.

20% Fluorescent Yellow next to black ink.

100% Fluorescent Yellow next to black ink.
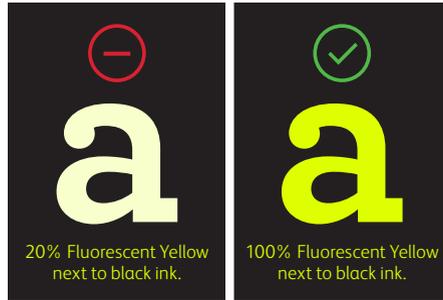
Avoid using tints of Fluorescent Yellow for text or fine lines. Using 100% Fluorescent Yellow is the best way to boost legibility.

Designing with light tints of Fluorescent Yellow can enhance CMYK and/or create eye-catching effects.

In Adobe® InDesign®, **Fluorescent Yellow text and graphics should be placed together on their own layer.**

In Adobe® Illustrator®, **all text and graphics (CMYK and Fluorescent Yellow) may be placed on a single layer.** When saved out of Illustrator, these elements are automatically flattened down so multiple layers are unnecessary.

NOTE: Unless something is specified to overprint in Illustrator, it will knockout.
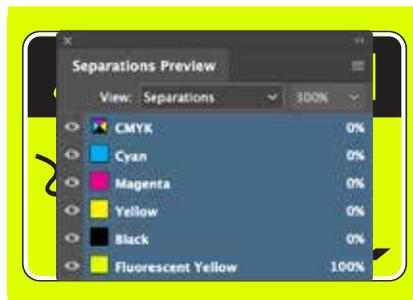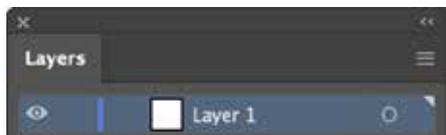
You can preview your file in Separation Preview within InDesign® or in Adobe® Acrobat® (*Print Production > Output Preview*) to make sure the Fluorescent Yellow elements are specified correctly.

Always request a hardcopy press proof to make sure printed results are matching your design intent.

If the Fluorescent Yellow Dry Ink did not print as you intended, you may have to enable Multiply or Overprint for overlapping elements.

Graphics created in InDesign® will typically require Overprint to be used for optimal print results.

If Fluorescent Yellow Dry Ink isn't printing at all, check that the custom spot is identified for each text/graphic with the same spelling in all cases (i.e., "Fluorescent Yellow").

Adding Fluorescent Yellow Dry Ink to your files.

Preparing bitmap images with Adobe® Photoshop®.

1 If you want a bitmap image to print in Fluorescent Yellow, you will need to begin with the image in Photoshop®. First, you'll **create or load your selection** of the image area you'd like to make Fluorescent Yellow, then invert and delete the background.

2 If you're starting with a color CMYK image, it will need to be converted to **Grayscale.**

To save as the correct file format, go to Menu and select **Image**, then **Mode**, then select **Duotone**.

Select Type as **Monotone**.

3 Click on **Ink 1** color, then choose RGB, and enter the following values: **(R 222, G 255, B 0)***

4 Then select **OK.**

* These RGB values best represent Fluorescent Yellow.

Preparing bitmap images with Photoshop®.

5 Select and rename the ink as **Fluorescent Yellow,** then select **OK**.

> The name "Fluorescent Yellow" is case-sensitive and should be used exactly as shown to ensure proper printing.

6 Save your file so it is ready to be placed into an InDesign® layout file.

Recommended file formats: Photoshop® DCS 2.0, PSD, EPS, and PDF.

The file should bring in the color Fluorescent Yellow as a 100% **Fluorescent Yellow** spot color.

SPOT CHANNEL NOTE:
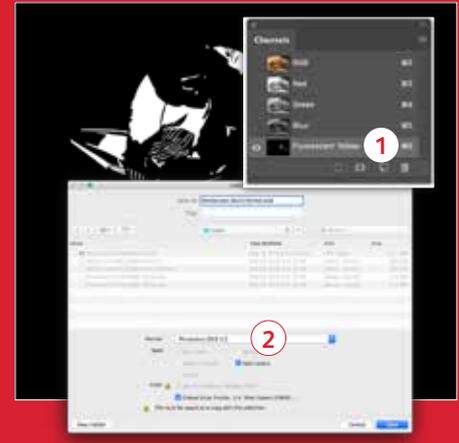
1 You can achieve this same result with another work process by creating a **Spot Channel** in Photoshop, naming it **Fluorescent Yellow.**

2 Then save as a **Photoshop DCS 2.0** file. You must embed the spot color and keep your naming convention the same.

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Adding Fluorescent Yellow Dry Ink to your files.

Creating vector graphics with Adobe® Illustrator®.

Vector graphics that are created in Illustrator® can be placed into Adobe® InDesign®.
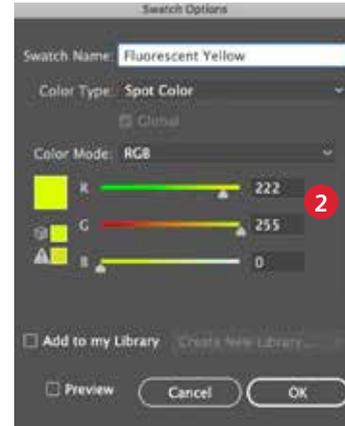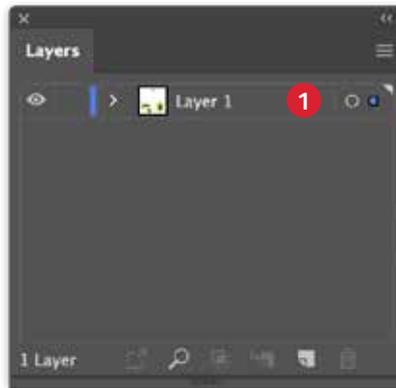
In the example shown, the Fluorescent Yellow Dry Ink will print **next to** the CMYK art.

1 Create your vector graphics on a single layer in Illustrator.

The name "Fluorescent Yellow" is case-sensitive and should be used exactly as shown to ensure proper printing.

2 Add a new color in the swatches palette to identify **Fluorescent Yellow** as a Spot Color. Go to the **Swatches Palette,** then **New Color Swatch > Swatch Name,** Type in **Fluorescent Yellow,** under **Color Type >** select **Spot Color,** under **Color Mode,** select **RGB,** and enter the following values: **(R 222, G 255, B 0)***

* These RGB values best represent Fluorescent Yellow.

Pulling it all together in InDesign®.

Now that you have created your imagery for Fluorescent Yellow, you are ready to put it together in your final layout.
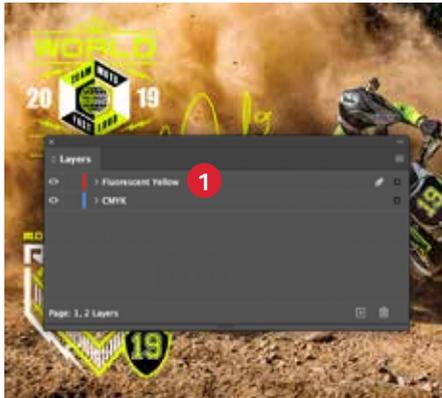
1 Create a new layer in InDesign® and name the layer **Fluorescent Yellow**.
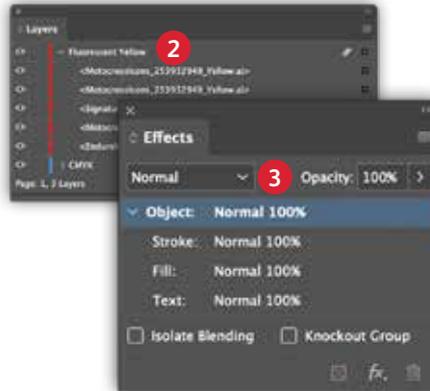
2 Import Illustrator® .AI/.EPS graphics into InDesign® onto the designated **Fluorescent Yellow** layer.
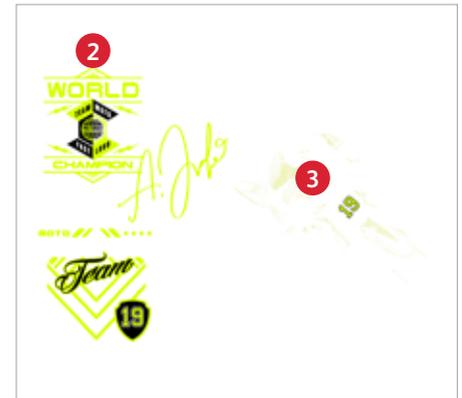
3 Import the Adobe® Photoshop® file into InDesign®, then choose **Multiply.**

Save your file and export as a high-resolution Adobe® PDF using the instructions on the next page.

Within InDesign®, make sure that you place the CMYK elements on your CMYK layer. The elements that contain Fluorescent Yellow should be placed on your Fluorescent Yellow layer.

Preparing PDF files for printing.

Exporting as a high-res Adobe® PDF from Adobe® InDesign®.
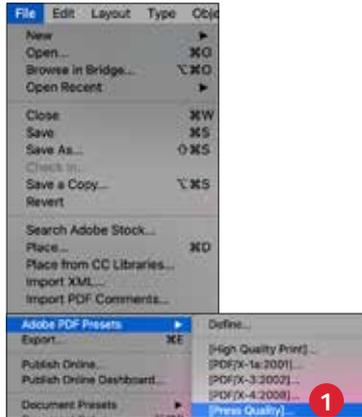
It's important to choose the correct settings when saving a PDF for printing with Fluorescent Yellow Dry Ink.

Follow these steps to create a PDF preset for saving high-res PDFs right out of InDesign®.

1 From the main menu, **select**: File > Adobe PDF Presets > **Press Quality**, and click **Save**.

2 **Select** General: Compatibility > and choose **Adobe® Acrobat® 7 or higher**.

3 On the lower-right side, check **Create Acrobat Layers**.
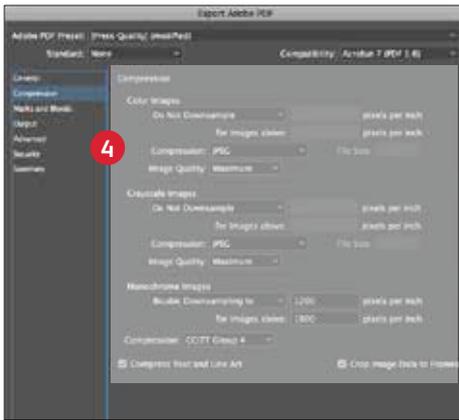
4 **Select** Compression: Color Images >
Do Not Downsample.

Compression > **JPEG,**
Image Quality > **Maximum**.

Choose the same for Grayscale
Images. For Monochrome Images >
CCITT Group 4.

5 Set up with **Crop Marks** and **Bleeds** if necessary.

Within Acrobat®, you can quality check your PDF layers before printing by
viewing the file in the Print Production > Output Preview window.

*   Automatic Multipass mode required.
**   Manual mode required.
     This requires a second file for the second hit.

Enhance your designs with White Dry Ink.

Adding White to your color palette lets you make a bigger visual impact.

Use White Dry Ink to add visual appeal and function to both colored and transparent media. Draw attention to graphics and emphasize images so they jump right off the page.

How to incorporate White Dry Ink into your designs:

Spot White Only	Next to CMYK	**Over CMYK** Single Hit*	Double Hit**	**Under CMYK** Single Hit*	Double Hit**

Media

White can be printed **next to** or **under CMYK** to enhance images and add more value to jobs.

Multipass Ink Layers

CMYK
(second pass)

White Dry Ink
(first pass)

Media

White enhances designs that print on dark cover stock – such as the holiday card shown here – creating higher-value postcards, invitations, posters, direct mail, and more.
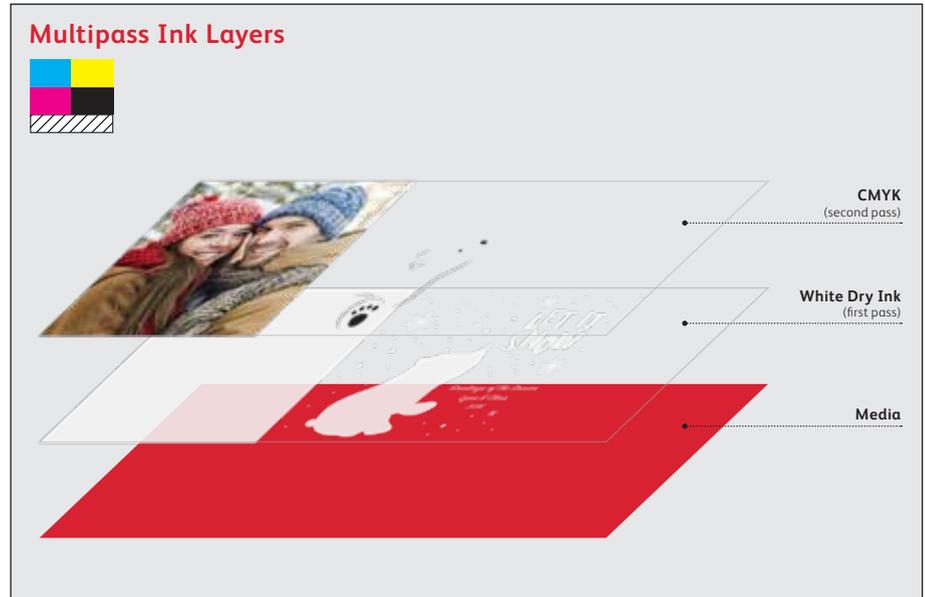
You can also choose to **add a second print pass of White** for more opacity.

Multipass Ink Layers

CMYK
(third pass)

White Dry Ink
(second pass - optional)

White Dry Ink
(first pass)

Media
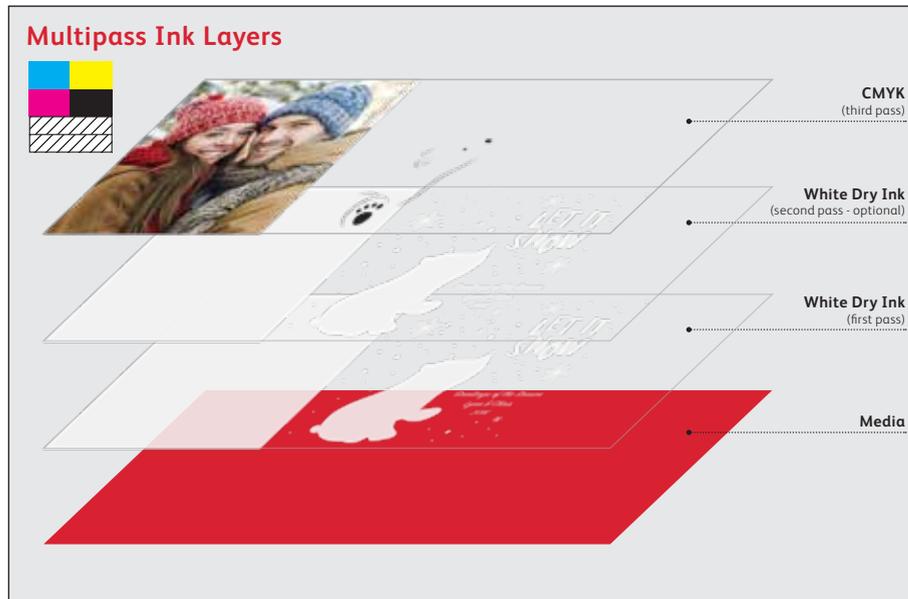
While one layer of White Dry Ink creates a look many clients are happy with, a second pass may be desired in some cases. This **would require a second PDF file** of the White only elements to allow for a second hit of White ink.

You may choose to test both options with press proofs before doing a full production run.

Whether running one pass of White Dry Ink or two, applying a choke to the White box(es) under the CMYK photo will help ensure an excellent print result and avoid registration variation.

Be aware running a second pass may cause the paper to shrink as it passes through the fuser a second time. This may lead to additional registration variation. It is good practice to always test designs on your media.

To create a bold look on dark media, **create a design that only uses White Dry Ink.**

White on its own creates dramatic effects on dark, heavy media, opening up new design possibilities for folders and collaterals.

Single Pass Ink Layers

White Dry Ink

Media
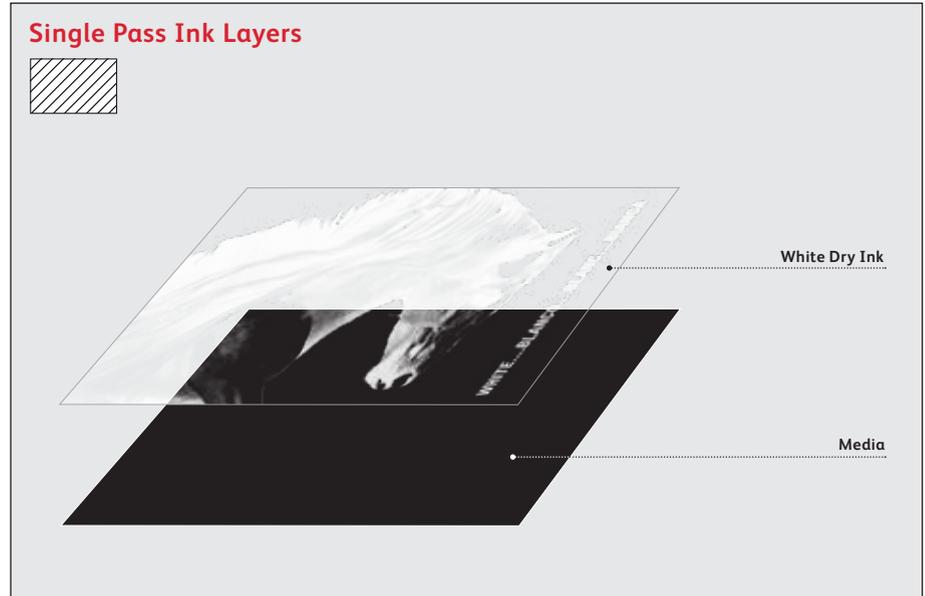
You can also choose to **add a second pass of White for more opacity.**

Multipass Ink Layers

White Dry Ink
(type second pass)

White Dry Ink
(image + type first pass)

Media
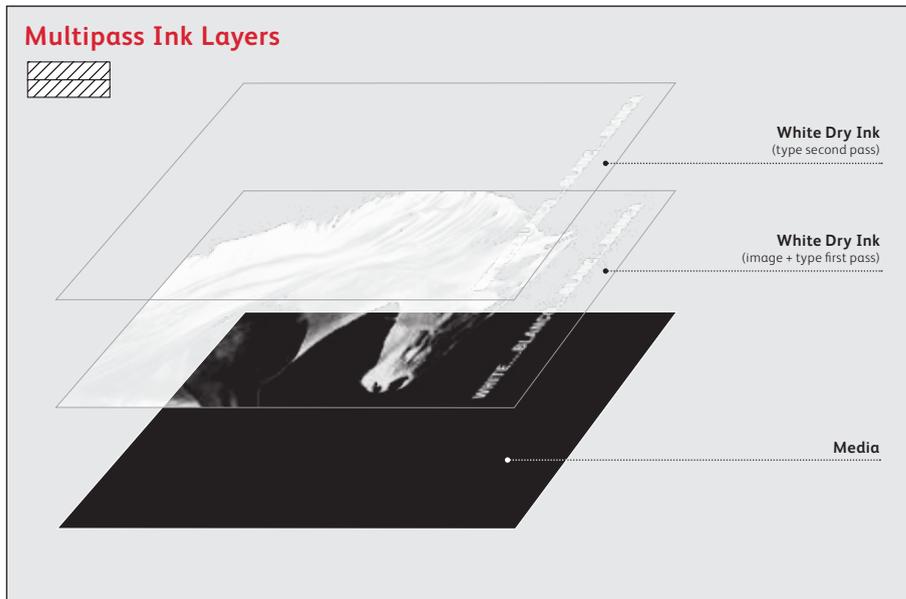
If you have selected specific elements—like the type shown to the left—to print in more than one pass, you should create a separate file for just those to help ensure the added opacity is right where you want it.

! A choke or spread is NOT required for two passes of White elements.

In certain applications, you can use **White over CMYK** to add an opaque background.

White creates new possibilities for window signage on transparent media. Depending on how the signage is being applied, White can be printed either under or over CMYK.

Multipass Ink Layers

White Dry Ink
(second pass)

CMYK
(first pass)

Media

In this example, we have choked the White so it does not spread beyond the CMYK elements.

White can also be used **under CMYK** to make colors pop on dark stocks.

White makes color pop on dark stocks, giving you a simple way to broaden the types of stocks you specify without giving up legibility or design impact.

Multipass Ink Layers

CMYK
(second pass)

White Dry Ink
(first pass)

Media
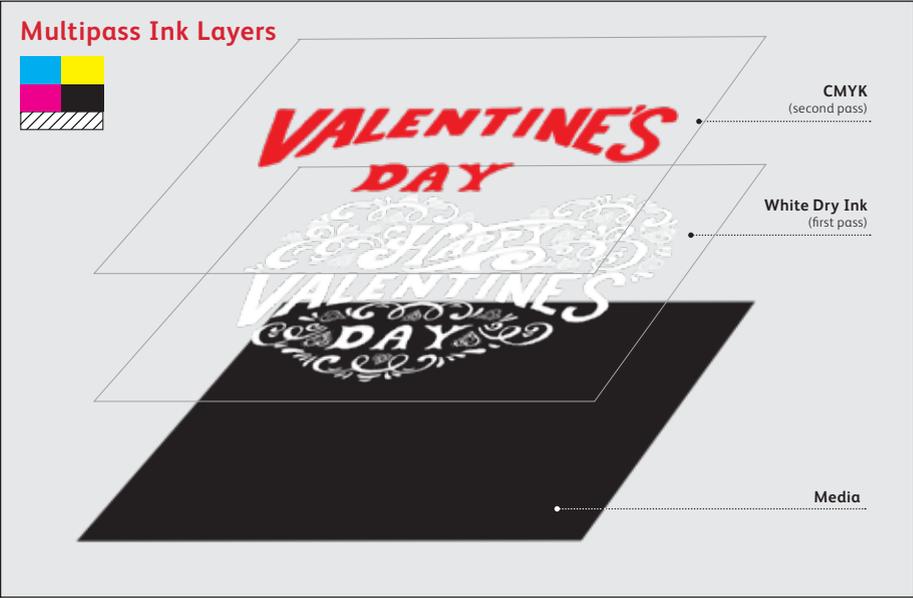
In this example, we have spread the CMYK text to fully cover the White underlayer.

Get the most from White Dry Ink.

abc123

abc123

Layers
CMYK
White
FPO – Black Layer
Page: 1, 3 Layers

a

a

20% white on red paper

100% white on red paper

Avoid serifs and small point text with White Dry Ink.

Avoid trying to trap to or overlap White to CMYK text and graphics with serifs or thin details.

White Dry Ink is intended for spot usage and not for flood needs.

Avoid double hits of White Dry Ink with small point text, as well as fine lines and small graphics.

A faux fill can be added as a layer within your design file to simulate a colored stock. This can help you better visualize the design (remember to delete or hide this layer when creating the Adobe® PDF).

Designing with tints of White is not recommended for text. If screens of White are used, text legibility may suffer.

In Adobe® InDesign®, it is required that **White text and graphics be placed together on their own layer. This is because you have the option of using White <u>over</u> or <u>under CMYK</u>.**

In Adobe® Illustrator®, all text and graphics **(CMYK and White) may be placed on a single layer.** When saved out of Illustrator, these elements are automatically flattened down so multiple layers are unnecessary.

NOTE: Unless something is specified to overprint in Illustrator, it will knockout.
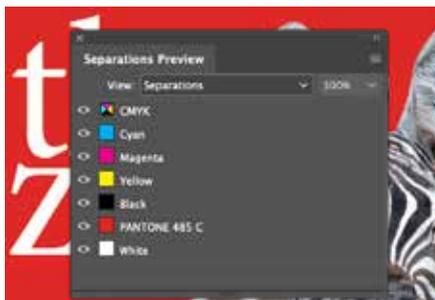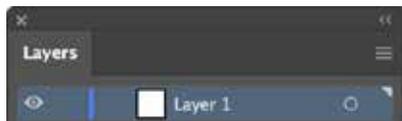
You can preview your file in Separation Preview within Adobe® InDesign® or in Adobe® Acrobat® (*Print Production > Output Preview*) to make sure the White elements are specified correctly.

Always request a hardcopy press proof to make sure printed results match your design intent.

Be aware running a second pass may cause the paper to shrink as it passes through the fuser a second time. This may lead to additional registration variation. It is good practice to always test on your media.

If the White Dry Ink did not print as you intended, you may have to enable Multiply or Overprint for overlapping elements or adjust your choke and spread settings.

If White Dry Ink isn't printing at all, check that the custom spot is identified for each text/graphic with the same spelling in all cases (i.e., "White").

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Adding White Dry Ink to your files.

Preparing bitmap images with Adobe® Photoshop®.

If you want a bitmap image to print in White, you will need to begin with the image in Photoshop®. If you're starting with a color CMYK image, it will need to be converted to **Grayscale** first. All **Grayscale** images then need to be inverted.

1 Go to **Menu** and select **Image**, then **Adjustments**, then select **Invert**.

2 To save as the correct file format, go to Menu and select **Image**, then **Mode**, then select **Duotone**.

Select Type as **Monotone**.

3 Click on **Ink 1** color, then choose the PANTONE® Solid Coated library.

4 Select PANTONE Process Magenta, then select **OK**.

Preparing bitmap images with Photoshop®.

5 Select and rename the PANTONE® Process Magenta as **White,** then select **OK**.

The name "White" is case-sensitive and should be used exactly as shown to ensure proper printing.
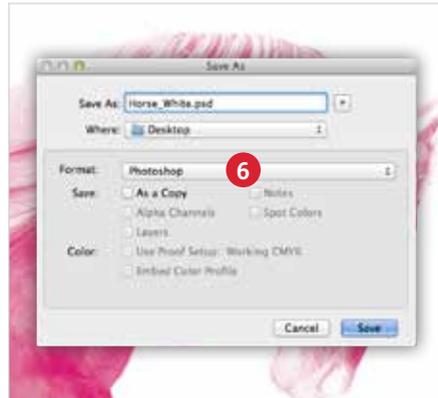
6 Save your file so it is ready to be placed into an Adobe® InDesign® layout file.

Recommended file formats: Photoshop DCS 2.0, PSD, EPS, and PDF

The file should bring in the color **White** as a 100% Magenta spot color.

SPOT CHANNEL NOTE:
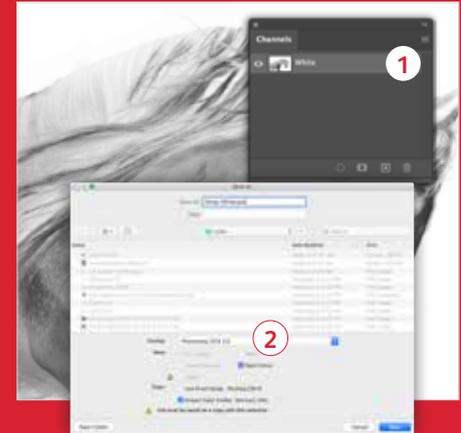
1 You can achieve this same result with another work process by creating a **Spot Channel** in Photoshop® and naming it **White.**

2 Then save as a **Photoshop DCS 2.0** file. You must embed the spot color and keep your naming convention the same.

Adding White Dry Ink to your files.

Creating vector graphics with Adobe® Illustrator®.

Vector graphics that are created in Illustrator® can be placed into Adobe® InDesign® and designated to print with White Dry Ink.
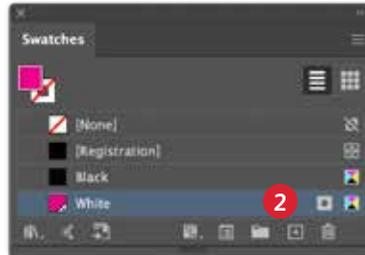
1 Create your vector graphics on designated layers in Illustrator®: one layer for CMYK, and one layer for **White**.

The name "White" is case-sensitive and should be used exactly as shown to ensure proper printing.

2 Add a new color in the swatches palette to identify **100% Magenta** as White and name it **White**.

Designate the Color Type as a CMYK **Spot** Color.

3 Save out each layer as a .eps to be placed into your InDesign® file.

In the example shown, the White layer needs to print **under** the CMYK art.

NOTE: Another option is applying overprint to the **White** fill if it is printing over CMYK. You can use this method instead of Multiply in InDesign®. To apply in Illustrator®, choose Window > Attributes > Overprint.

Pulling it all together in InDesign®.

Now that you have created your imagery for White, you are ready to put it together in your final layout.
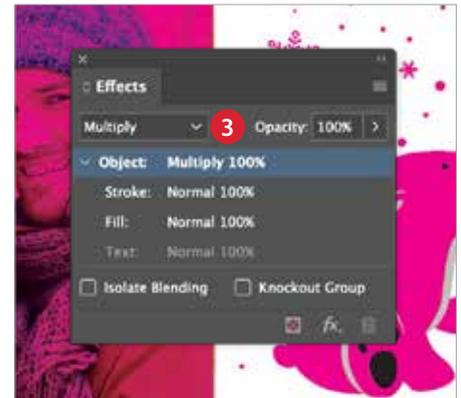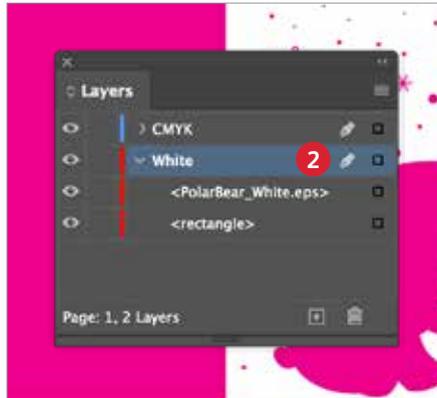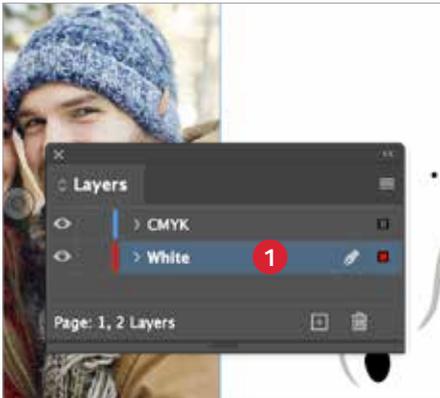
1 Create a new layer in InDesign® and name the layer **White**.

2 Import Illustrator .eps graphics into each designated layer within InDesign: one layer for CMYK, and one layer for **White**. Add a choke to the White layer.

3 For graphics imported into InDesign®, choose **Multiply**; for those created within InDesign®, choose **Overprint**.

Save your file and export as a high-resolution Adobe® PDF using the instruction on the next page.

▷◁ Within InDesign, make sure that you place the CMYK elements on your CMYK layer and the White elements on your White layer, then ensure you have applied the proper choke to the White elements.

Preparing PDF files for printing.

Exporting as a high-res Adobe® PDF from Adobe® InDesign®.
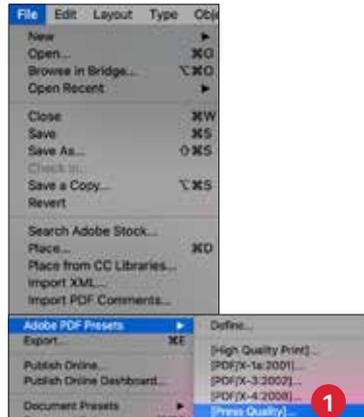
It's important to choose the correct settings when saving a PDF for printing with White Dry Ink.

Follow these steps to create a PDF preset for saving high-res PDFs right out of InDesign®.

1 From the main menu, **select**: File > Adobe PDF Presets > **Press Quality**, and click **Save**.

2 **Select** General: Compatibility > and choose **Adobe® Acrobat 7® or higher**.

3 On the lower-right side, check **Create Acrobat Layers**.

4 **Select** Compression: Color Images > **Do Not Downsample**.

Compression > JPEG, Image Quality > **Maximum**.

Choose the same for Grayscale Images. For Monochrome Images > **CCITT Group 4.**

5 Set up with **Crop Marks** and **Bleeds** if necessary.

Within Acrobat®, you can quality check your PDF layers before printing by viewing the file in the Print Production > Output Preview window.

Add decorative and security effects with Clear Dry Ink.

Emphasize important content and make an eye-catching impression that drives results.

The addition of Clear Dry Ink in the 5th print station expands the versatility of the iGen® 5 Press and allows you to offer customers a distinctive selection of specialty embellishment options for additional impact.

How to incorporate Clear Dry Ink into your designs:

Spot

Clear Only

Next to CMYK

Media

Get the most from Clear Dry Ink.
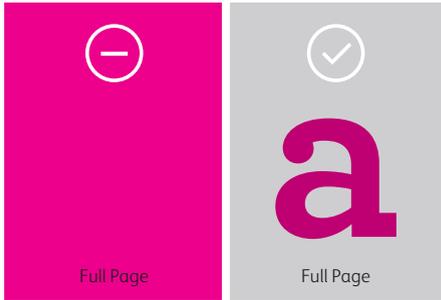
Clear Dry Ink is intended for spot usage and not for flood needs.
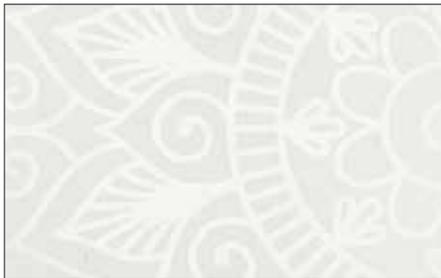
Clear Dry Ink shows best on silk-coated media.
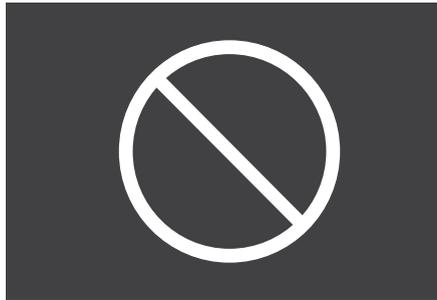
We do not recommend applying Clear Dry Ink over dark or saturated colors.

In Adobe® InDesign®, it is required that **Clear text and graphics be placed together on their own layer. This is because Clear will be used as a spot or next to CMYK and the layer should be placed above the CMYK layer.**

NOTE: It is required to multiply Clear design elements.

44
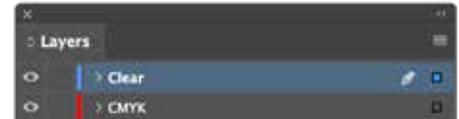
In Adobe® Illustrator®, **all text and graphics (Clear and CMYK) may be placed on a single layer.** When saved out of Illustrator, these elements are automatically flattened down so multiple layers are unnecessary.

NOTE: Unless something is specified to overprint in Illustrator, it will knockout.
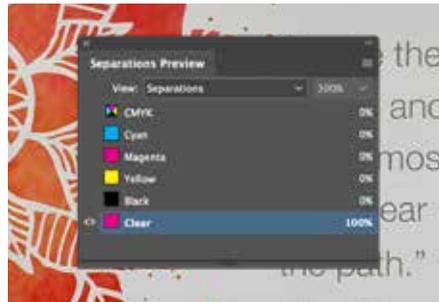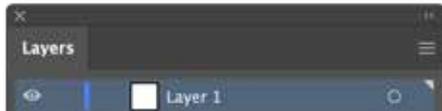
You can preview your file in Separation Preview within Adobe® InDesign® or in Adobe® Acrobat® (*Print Production > Output Preview*) to make sure the Clear elements are specified correctly.

Always request a hardcopy press proof to make sure printed results are matching your design intent.

If the Clear Dry Ink did not print as you intended, you may have to enable Multiply or Overprint for overlapping elements or adjust your choke and spread settings.

If Clear Dry Ink isn't printing at all, check that the custom spot is identified for each text/graphic with the same spelling in all cases (i.e., "Clear").

Adding Clear Dry Ink to your files.

Setting up your Adobe® InDesign® file for printing with Clear Dry Ink.
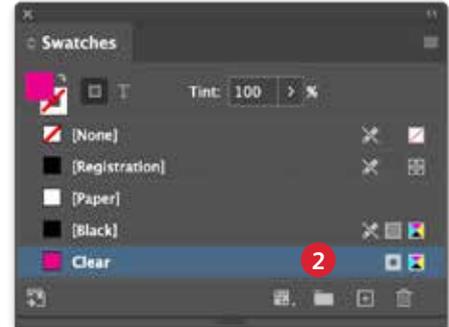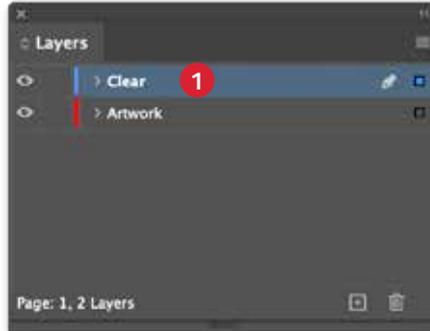
1 In InDesign®, add a second layer in the Layers palette for Clear Dry Ink.

Name the new layer **Clear**.

The name "Clear" is case-sensitive and should be used exactly as shown to ensure proper printing.

2 Add a new color in the Swatches palette to identify **100% Magenta** as Clear and name it **Clear**.

Designate the Color Type as a CMYK **Spot** Color.

Fill your shape with the new **Clear** color swatch.

Within InDesign, make sure that you place the CMYK elements on your CMYK layer and the Clear elements on your Clear layer, then ensure everything is registered appropriately.

If precise alignment is needed between CMYK and Clear elements, be sure to set choke or spread in your file.
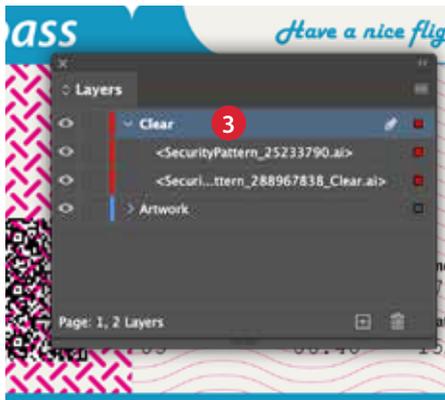
3 Import vector graphics, draw and fill a shape, or select text that will have the **Clear** Dry Ink applied. Make sure all elements you want to print with Clear are placed on the **Clear** layer.

In the example shown, the Clear layer will print **over** the CMYK art.

4 For graphics imported into InDesign®, choose **Multiply**; for those created within InDesign®, choose **Overprint**.

Save your file and export as a high-resolution Adobe® PDF using the instruction on the next page.

NOTE: Another option is applying overprint to the **Clear** fill when it is printing over CMYK. You can use this method instead of Multiply in InDesign. To apply in Adobe® Illustrator®, choose Window > Attributes > Overprint.

Clear will always print over CMYK.

Preparing PDF files for printing.
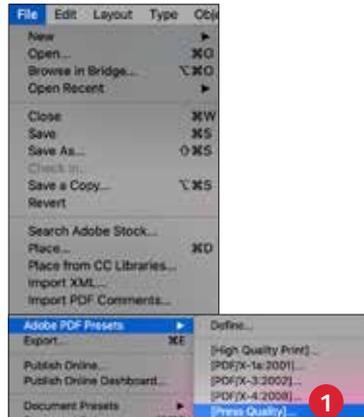
Exporting as a high-res Adobe® PDF from Adobe® InDesign®.

It's important to choose the correct settings when saving a PDF for printing with Clear Dry Ink.

Follow these steps to create a PDF preset for saving high-res PDFs right out of InDesign®.

1 From the main menu, **select**: File > Adobe PDF Presets > **Press Quality**, and click **Save**.

2 **Select** General: Compatibility > and choose **Adobe® Acrobat® 7 or higher**.

3 On the lower-right side, check **Create Acrobat Layers**.
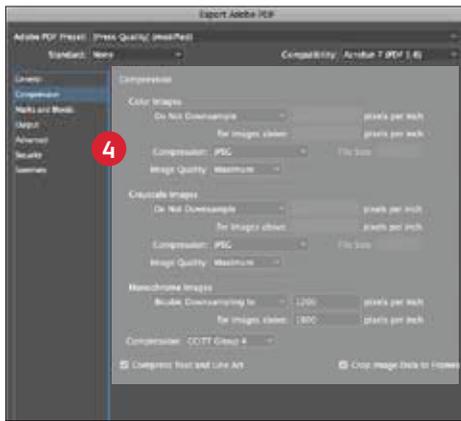
4 **Select** Compression: Color Images >
Do Not Downsample.

Compression > JPEG,
Image Quality > **Maximum**.

Choose the same for Grayscale
Images. For Monochrome Images >
CCITT Group 4.
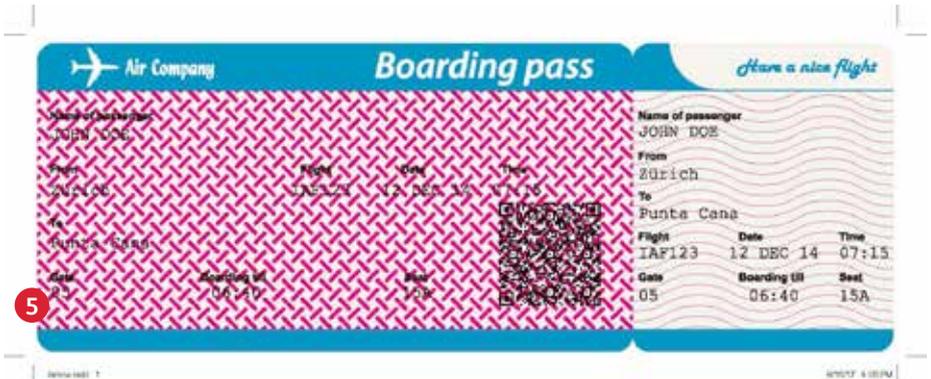
5 Set up with **Crop Marks** and **Bleeds** if desired.

Within Acrobat, you can quality check your PDF layers before printing by
viewing the file in the Print Production > Output Preview window.

Multipass choke and spread adjustments.

Choke and spread are two adjustments that will help compensate for any slight movement of paper between multiple print passes. These adjustments create a small overlap that covers unwanted gaps, specifically when using Xerox® White Dry Ink. The adjustment you choose will depend on your design.

Choking makes an element smaller. It should be used on bottom layer elements that don't need to be an exact size—for example, a White box under an image.
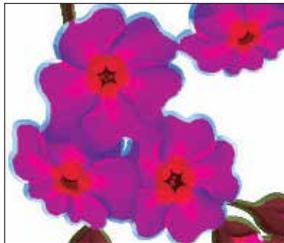
In this case, the White area under the flowers is choked in slightly to compensate for small movements of the paper between passes.

The image then completely covers the White box under it.

We recommend you choose a color to make the White and Clear effects easily identifiable within your files.
In this guide, we will use 100% Magenta as that color.

Your design—along with the stock you've chosen and the specific iGen® 5 Press your print provider is running—will determine the exact amount of choke or spread needed. You should always request a press proof to ensure the results match your design intent.

Spreading makes an element larger. It should be used on top layer elements when retaining shape is more critical—for example, a CMYK logo over White Dry Ink.

Spreading the CMYK slightly will cover the bottom layer of White while retaining your intended design appearance on dark stocks.

Any extra CMYK spread blends in with the dark background stock color.

With one print station, you get virtually unlimited possibilities.

The 5th print station allows you the flexibility to meet a wider variety of PANTONE® colors and elevate your prints with eye-catching appeal. With Xerox® Fluorescent Yellow, White, and Clear Dry Inks, you can easily design with enhanced creativity in mind.

To learn more about Xerox® iGen® 5 Press, please contact your Xerox representative or visit **xerox.com.**

Xerox™

A world of opportunity.

The print landscape we were all comfortable with for the last decade and more has undeniably changed. And, while that can seem daunting, today's realities also open doors to very real opportunities.

Change the way your customers see digital printing — and the way they see you. They may view digital as being suitable only for a limited subset of jobs — but now, digital is a solution that increases capabilities and enables a wider variety of jobs, making you the go-to print provider.

Increase productivity and profit. The more time you can spend printing without setup, manual calibration, and rework interruptions, the more profitable you become. A solution that builds simplicity and predictability into the equation keeps you in the black.

Offer the high-value options your customers want. Clients are looking to stand out with accurate brand colors, varied finished sizes, and specialty embellishment options. Having a digital solution with these capabilities — and more — can make you an essential partner.

The changing world of printing.

Change creates opportunity. The growth of digital printing and shifts in customer demand toward shorter runs with variable information mean there is an opening for a print provider who is prepared to step in, step up, and satisfy more customers.

But what does it mean to be ready for that opportunity?

CHANGE: EXHIBIT A — DECLINING PRINT RUN LENGTHS; MORE SHORT RUN JOBS PER DAY.[2]

In the early days of digital, run lengths used to be in the thousands. You could essentially maintain an offset workflow because you only printed a few digital jobs a day. But shifting customer needs have changed the equation. Now, customers want runs in the hundreds — or less. That places completely different demands on you and the solution you count on to meet those customer needs.

[2] Keypoint Intelligence / InfoTrends Beyond CMYK 2016
N = 417 Print Service Providers and In-plant Printers

- ■ Do not offer
- ■ Stay the same
- ▨ Decrease
- ■ Increase
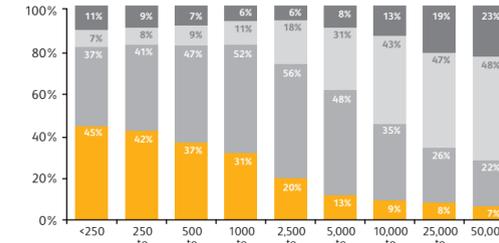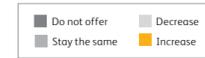
CHANGE: EXHIBIT B — INCREASING CAPABILITIES.

Yes, printing is changing — for the better. This brochure is an ideal example. In the not-too-distant past, it would have been impossible to produce this brochure effectively. The requirement of a 5th spot color would have called for an offset solution and a longer print run to make it cost-effective. And, the desired run length of exactly one — yours — would have been impossible using that production method.

Today, it's easy thanks to the Xerox® iGen® 5 Press.

PMS 137 +

PANTONE® color   Short run

5 EQUALS ONE — A SINGLE PLATFORM.

The Xerox® iGen® 5 Press unites all the elements of the iGen® family in a single, configurable platform so you can choose the exact configuration you need to succeed. Press speed, number of colors, feeding, and finishing — all are integrated into an end-to-end solution as unique as the challenges and opportunities you face every day.

Press speed   4 or 5 colors   Feeding + finishing

Connect and learn more.

FOLLOW US ON TWITTER
@XeroxProduction
twitter.com/XeroxProduction

TUNE IN ON YOUTUBE
Corporate Videos
youtube.com/xeroxcorp

SHARE YOUR THOUGHTS
Digital Printing Hot Spot Blog
digitalprinting.blogs.xerox.com

LIKE US ON FACEBOOK
facebook.com/XeroxCorp

Learn more at **xerox.com**

Xerox® iGen® 5 Press

Your digital printing world just got more flexible — and more profitable.

It's an iGen® 5 world.

The Xerox® iGen® 5 Press is built for the changing world of printing so you can seize new, profitable opportunities. The industry's most available and productive digital press platform offers enhanced and valuable capabilities — like a 5th print station for gamut extension and digital embellishments — giving you a compelling solution to the way our print world operates today.

Digital CMYK... plus.

ADD ONE PRINT STATION — AND GET VIRTUALLY UNLIMITED POSSIBILITIES.

The opportunity for digital print gets significantly more compelling when embellishment is added to the picture. Incorporating a 5th print station into your Xerox® iGen® 5 Press enables you to hit more PANTONE® colors or apply a variety of specialty effects — all in-line — so you can meet growing demands. And, the demand is clearly here. According to InfoTrends, 54.3% of print providers surveyed are considering purchasing a digital printing device with some sort of enhancement in 2018.[1]

25B
Digital print enhancement volume is predicted to grow at a 27% CAGR from 2015 to 2020, reaching 25 billion pages by 2020.

400%
Print service providers' profit margins on digital print enhancement can be very high (50% to 400%), resulting in a quick return on investment (ROI).

89%
Print buyers indicated they are willing to pay a premium of 24% to 89% over CMYK only for digital print enhancements.
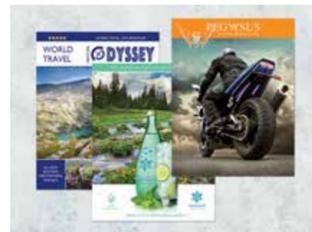
EXTEND YOUR GAMUT AND YOUR SPOT COLOR REACH — ADD A 5TH COLOR.

The 5th print station allows you to quickly load Orange, Green, or Blue Dry Ink as a supplement to CMYK, extending the press' gamut and making it easy to match a wider variety of PANTONE® colors — over 90% of the PANTONE® PLUS swatch book — so you can keep more of your print buyers on-brand.

ELEVATE YOUR PRINTING CAPABILITIES — ADD WHITE TO YOUR COLOR PALETTE.

With Xerox® White Dry Ink in the 5th print station, you can add eye-catching appeal to applications such as business cards, greeting cards, invitations and folding cartons on colored specialty substrates. White also provides a functional layer to transparent media for retail signage, letting you hang an "Open for Business" sign up for a whole new line of work.

ENHANCE CREATIVITY AND SECURITY — ADD CLEAR DRY INK.

Create decorative spot varnish effects or apply a watermark using Xerox® Clear Dry Ink in the 5th print station. Clear's gloss effect makes a high-value impression that enhances the design of virtually any digital print. As a watermark, Clear adds an extra level of security to tickets, passes, and more.

1 Keypoint Intelligence / InfoTrends Beyond CMYK 2016

Automatically better.

The Xerox® iGen® 5 is the most productive digital press on the market, thanks to unprecedented levels of automation and intelligence built into the press from end to end. This automation radically reduces setup, improves image quality, reduces labor costs, and drives more profitable turnaround times.

The impact is immediate and dramatic both in your print shop and on your bottom line.
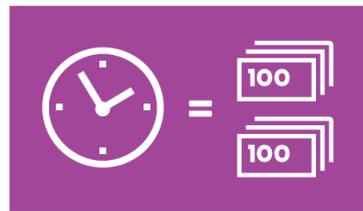
XEROX® FREEFLOW® CORE — AUTOMATED SPEED.

You're not just in the business of printing. You're in the business of speed. That's why it is so important that you think outside the box and consider the value of every step in the print process.

When you combine the efficiency of the iGen® 5 with the power of FreeFlow® Core, getting more color options doesn't mean losing more prepress time. You can quickly and easily set up workflows using Xerox® FreeFlow® Core to automatically prepare files for print, taking touchpoints out of your process and running more jobs with your press.

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5 MORE MONTHS WITH iGEN® 5 — AUTOMATION AND PRODUCTIVITY.

The iGen® family has always been about making a finite amount of time work harder for you. Because of its advanced automation, the Xerox® iGen® 5 delivers more production time — up to 40% more, which equals five more months of production time every year. When other print providers are producing 12 months of jobs in the next year, you can produce 17.

- iGen 150 Production Time
- Service
- Repair
- Quality Control
- Waiting for Press
- Paper Jam
- Planned Maintenance
- Consumable Change
- Press Error Waste
- Job Setup
- Morning Routine

YOU'VE GOT AN IMAGE TO UPHOLD — ATTAINING AND MAINTAINING OUTSTANDING IMAGE QUALITY.

The process of achieving consistent, sellable image quality can be manually intensive with other digital production solutions. Print, calibrate, print, adjust, and print again. Our built-in automation makes it predictable and efficient. You can easily attain the excellent color you need and maintain it from shift to shift and press to press.
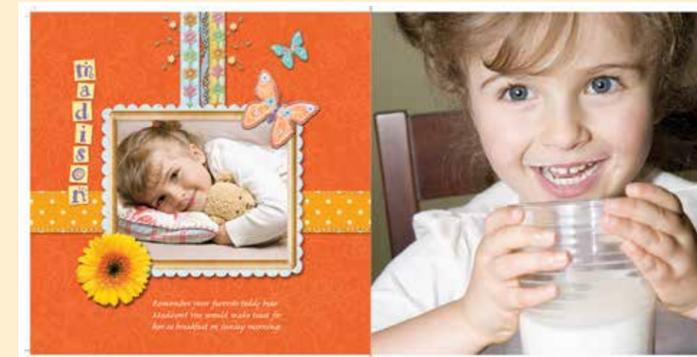
Automated Color Maintenance Tool: Automates linearization, calibration, and profiling for color consistency and accuracy one day to the next.

Auto Carrier Dispense: Combines dry ink and carrier, yielding consistent smoothness from the first print to the last.

Auto Density Control: Patented technology designed to detect streaks before they occur and digitally compensate for any inconsistencies without operator intervention.

Automated Image-on-Paper Technology: Produce more varied short-run jobs with very precise image-on-paper registration without losing time with each paper size change.

Object-Oriented Halftoning: When selected, the iGen® 5 uses Object Oriented Halftoning to render image and text elements differently to maximize quality. A 180-line screen is used for images to produce optimal smoothness. Text is rendered at a 250-line screen that is optimized for sharpness. This lets you provide stunning results without tradeoffs for critical jobs such as brochures and catalogs.

Maximize your digital investment.

The Xerox® iGen® 5 increases your capabilities through a combination of flexible platform attributes. We'll help you select the options that will best drive your business so you get a press that's supremely customized for today — as well as one that's ready for future innovations.

THINKING BIG STARTS HERE — 26" (660 MM) SHEET.

Gatefold Brochure
Finished Size 280x648 mm
1,500 per hour – 4/4

Trifold Brochure, 3 Up
Finished Size A4
4,500 per hour – 4/4

Table Card, 10 Up
Finished Size 127x178 mm
15,000 per hour – 4/4

Pocket Folder, Vertical
Finished Size 216x305 mm
1,500 per hour – 4/4

Business Cards, 42 Up
Finished Size 89x55 mm
63,000 per hour – 4/4

Postcard, 12 Up
Finished Size 102x152 mm
18,000 per hour – 4/4

There has been a perception that digital printing offers a restricted range of jobs in part because of sheet size. But iGen® 5 runs up to a 26" (660 mm) sheet.

That enables you to print more jobs more economically; unique applications such as 6-panel brochures, gatefold pamphlets, pocket folders, and eye-catching direct mail pieces.

THE LOOK YOUR CUSTOMERS ARE LOOKING FOR — MATTE DRY INK.

Matte Dry Ink lets you better emulate the look of offset and produce a wider range of jobs — including photo books, and other keepsakes — by optimizing the uniformity of gloss appearance across highlights, midtones and shadows. It extends your job flexibility, providing a pleasing offset-like matte finish, particularly on uncoated or silk stocks.

EXPAND YOUR OPPORTUNITIES WITH THE THICK STOCK CAPABILITY.

Add the Thick Stock Capability and your opportunities grow even further to include point-of-sale displays, folding cartons, and other applications that benefit from high-caliper media up to 24 pt (610 microns).

THE RIGHT FINISHING TOUCHES — XEROX® INTEGRATEDPLUS FINISHING SOLUTION.

The right finishing solution is crucial to accepting a wide range of jobs and producing them to your customers' satisfaction. Xerox® IntegratedPLUS Finishing Solution extends the convenience and cost effectiveness of automatic finishing to multiple printers — including Xerox® and non-Xerox® printers in the same shop. It eliminates the need for highly skilled prepress operators and does away with manual programming, boosting efficiency on every job.