Design for Success

A guide to maximizing your investment in inkjet.
Making Inkjet Work for You

When implemented well, inkjet can be an incredible boost to production print operations, reducing operational costs and facilitating new revenue-driving application opportunities.

To be successful, it’s important to know how a new inkjet press will impact your jobs. You should understand what operators need to learn – and do – to make an inkjet operation successful right from the start, as well as what designers must do differently to get their files ready and achieve outstanding results.

There are obvious differences between inkjet and offset print production… as well as between inkjet and xerographic toner-based print production. There are also some not-so-obvious differences – and it’s important to know what they are before you get started. That’s why we’ve compiled this Guide. It’s full of knowledge, experience, and hints to help you get the most out of your new inkjet press while avoiding potential pitfalls.

How to use this guide:

There is a significant amount of information contained within the upcoming pages and we have designed it to be referenceable, easy to scan, and easy to read.

We know that press operators are most interested in operating tips and designers are most interested in design tips, so we have created the following icons to help you find what’s most relevant to you – quickly:

- **Inkjet Insights**
- **Operator Tips**
- **Design Tips**
There’s so much inkjet can do for you – and your customers. It’s best to review this guide in its entirety before you start printing.
## Reduce costs with inkjet:

Many print providers see production inkjet as a way to re-evaluate their business and transform operations to drive cost out. This could be via consolidation of equipment, elimination of pre-printed forms, workflow automation, an increase in productivity, or a decrease in run costs, waste, and inventory.

### Transaction
- **Eliminate Pre-Printed Forms**
  Operational efficiencies can be achieved by removing pre-printed statement and invoice forms. A white-paper in approach removes the need for offset shell production and costly warehousing.
- **Maximize Communications**
  Manage costs by including marketing messaging into transactional communications already destined for the mail stream to reduce mailings and save money.

### Direct Mail
- **Eliminate Pre-Printed Templates**
  An expanding range of inkjet media makes a white paper-in approach viable for more direct mail jobs, removing the need for offset production and costly warehousing of pre-printed templates.
- **Optimize Production Economics**
  Inkjet delivers high volume and quality with attractive economics across a range of papers, providing more production flexibility within print environments to right size jobs for the right technology.

### Books + Publications
- **Run Low-Cost Book Media**
  Inkjet reliably runs the majority of 60-90 gsm trade book media, keeping paper costs within expected ranges while delivering crisp quality.
- **Eliminate Warehousing and Mitigate Risk**
  For publishers, profitability depends on the ability to effectively manage book demand. Inkjet enables right-sized production runs to optimize run costs with technology flexibility.

### Catalogs
- **Leverage Offset Media with New Ink Sets**
  As inkjet technology capabilities broaden to support offset coated media, image quality equivalent to offset at a compelling cost-per-page allows production runs to be optimized.
- **Do More With Less**
  To reduce costs, catalogers are moving away from large, often costly generalized runs in favor of smaller, segmented catalogs. These needs are well-matched by production inkjet technology.
Grow revenue with inkjet:

The other bottom line benefit of inkjet is revenue growth, which often requires re-engineering offset jobs to leverage variable information, adding relevance and value. This transformation can open the doors to new work and new growth.

Integrate Marketing Content for New Revenue

By treating the white space on statements such as a billboard, complementary products and services can be promoted. This leverages an idle asset to generate revenue.

Move from Personalized to Personal

Relevance is the key to direct mail success. Personalization is more than including a recipient’s name and address – it means tailoring imagery, messaging and offers to that specific individual to drive higher response rates.

Boost Engagement with Personalized Publications

Magazines can be personalized in a variety of ways to better engage readership and meet the goals of publishers and advertisers. Segment-specific content, data-driven personalization and personalized ads can all drive value – and new revenue.

Drive Orders with Segmentation and Targeting

More and more brands are opting to send customized catalogs that reflect an individual customer’s past purchases or seasonal items in geographic regions. One retailer saw a 51% higher average order value with this approach versus static catalogs.¹

Research has shown this can increase profits by up to 60%² over a print-only approach.

¹ Reppa Customer Test
² Gartner Group and Leading on the Edge of Chaos, Emmett C. Murphy and Mark A. Murphy
 Expect More from Statements and Invoices

Transactional documents are a necessary part of doing business for a lot of companies. “Must-read” customer communications – like bills, statements, and invoices – can be printed on an inkjet press at a lower cost per page.

Inkjet technology also offers you, and your customers, an opportunity to generate new revenue with these jobs. You can upgrade standard transactional documents to TransPromo applications, bringing new marketing power and potential to a medium with proven open-and-read rates.

Opportunities to engage:

**Statements**

A. Personalized message  
B. Inspirational imagery based on profile  
C. Personalized chart data  
D. Personalized QR code  
E. Tailored savings based on purchase history

**Cyclical Billing**

A. Personalized message  
B. Inspirational imagery based on profile  
C. Personalized chart data  
D. Personalized QR code
When you need to keep costs down, low area coverage makes plain paper an option.

Shorter run lengths are no problem—you can run virtually any form without additional press set up.

Allows you to entirely shift production to a white-paper in only factory.

Inkjet advantages:

Color can be utilized without pre-printed forms or shells.

Migrating to your new press.

Before you switch transaction printing to your inkjet press, there are a few things you should know.

**Coming from an offset shell workflow** — While shells are printed on specific stocks, it’s critical to ensure the media you choose for inkjet will work broadly across multiple applications. Making these determinations up front minimizes performance “surprises” and reduces production time by eliminating the need to switch rolls.

**Color management and matching** — With its wide gamut and spot color capabilities, offset color is more consistent and intuitive than inkjet color. With inkjet, the gamut is smaller and you will need to have a color management strategy in place to reproduce brand managed spot colors. You’ll also need to a management strategy to match color across presses. For more information, refer to the color tips on page 32.

**Workflow** — With xerography, you can simply load a shell and hit “print.” With inkjet, you’re submitting PDFs, merging data, and tracking information. With so many points to monitor, it’s important to have an established workflow in place before you print.

**Insourcing** — To ensure you’re making the most of your new technology and have good press utilization, you will want to gradually increase the volume of work. This can be done by bringing in jobs that would have been sent out in the past.
When it’s time to leverage the white space on your transaction documents with customized marketing messages, the advantages of inkjet are virtually endless.

Your customer may be used to sending fairly basic statements each month. This gives you several opportunities to add value…

If you have a fixed area of white space on every page, you can insert images or message blocks there. The images and blocks of text can be static or variable but they must be contained to that fixed space.

Build in ample space wherever multiple images are used to prevent saturation.
Re-engineering

Keeping the document structure the same while colorizing key elements can be a quick and cost-effective way to transition your monochrome apps to inkjet. Avoid scanning pre-printed forms to use as an overlay. Instead, ask your forms vendor for the artwork or recreate it using standard tools like Adobe Creative Suite.

Document Re-Design

When it’s done correctly, document redesign allows you to optimize space and take full advantage of the inkjet technology.

Operator Tips

Maintain and calibrate your press properly to keep colors consistent.

Simplify application modification with Xerox + partner tools that let you easily include graphics and charts, insert blocks of text or images, merge new colorized overlays, and add variable data.

Be aware of potential color trade offs if you’re coming from offset — make sure to choose colors within the gamut of your new press.

Remember that paper choice — especially uncoated/untreated — can affect color saturation.
It’s all about the design.

Whether you’re making a few minor updates or embarking on a complete redesign, it’s important to be smart about how you utilize variable data. What you include, how it’s displayed, and the colors you use can make a very big difference for certain types of transaction documents. Before you go to print, make sure you’ve considered all of the design tips below.

For Financial Statements

Represent several variable components of data using graphics that show performance or annual changes.

Include a pixel or two of white or black space between bar graphs and pie charts for optimal show.

Avoid colors in the yellow range – if you use line graphs – they don’t show well against a white background.

For Cyclical Billing

Use white space to add graphics showing usage or spending patterns.

Choose colors within the inkjet gamut when transitioning from a pre-printed form or “shell”.

Avoid overpowering the document with too many (or very large) images. Limit image content to a third of the page.

For Intelligent Variable Data

Know that variable data documents may need enhancements to run efficiently on inkjet presses – even if they’ve been effective on other presses before.

Content should be customized to include relevant, targeted and personalized marketing offers that contain a time sensitive call to action.
Take Personalization to a Whole New Level

You’re already taking advantage of dynamic messaging and imaging to maximize personalization but inkjet makes it more cost effective and streamlined than ever before. As a service provider, you have the opportunity to position and sell advanced personalization as a more regular, affordable offering.

Solicitations

Many charitable organizations, associations, schools, and for-profit businesses depend on the success of their solicitations. And the more personalized they are, the better they perform – especially considering the low economics of inkjet.

Self-Mailers

When it comes to high-volume full color mailers, direct marketers love the results that dynamic, high quality inkjet production lets them achieve.

Inserts to Onserts

Marketers typically include inserts with personalized documents, like healthcare benefit explanations and bank statements – but inkjet makes it easy to print their messaging right in the body of that same document.

Design Tips

- Design in a ¼” border for continuous glue lines - or ½” if you’re using glue spots.
- If you plan to add perforations, use 150 gsm or heavier stocks.
- To make sure the piece is compatible with the postal service’s equipment, use 105-120 gsm papers (28-32lb bond).
- Mailers can mimic an enveloped mail piece – without the envelope.
Consider the Imposition

Production inkjet takes advantage of something web-fed offset users have known for years: paper lengths can be virtually infinite. Choosing the proper imposition point can increase productivity and operational flexibility.

A continuous web allows you to employ a multitude of layout options that cannot be run on a cut sheet printer. Four panel folds and accordions are both great options for direct mail, and how you lay them out is important. The imposition directly affects productivity and cost.

Imposing in the design application is the best way to ensure the piece is formatted the way the designer intended, but it limits mobility if the job needs to be moved to a different type of press.

Imposing after the application has run alleviates that concern but you must create an imposition for each press type.

Several inkjet DFEs have on-board imposition tools that take the single pages from the application and lay them out without productivity degradation. This is the recommended place to impose because it offers flexibility without affecting performance.

Operator Tips

- Use industry standard data like PDF, AFP/IPDS or PPML.
- Optimize the layout and design to minimize RIP impact and maximize press performance.
- RIP images into video feeds for inkjet heads and cache repeated resources in your variable data print streams.
Data for direct mail.

For a long time, high-volume direct mail was typically static content printed on offset shells with a name and address added via laser or inkjet imprint. Not only was it cheap, the data it required was incredibly simple.

When you make the switch from offset to digital inkjet, data preparation is a little bit more complex because it needs to be “composed” for the press. Don’t let that scare you though, it’s quite simple – as long you enable your workflow properly.

You can use an off-the-shelf software package to merge your name and address file with the imagery you’re producing.

Working collaboratively with a variety of trusted partners, Xerox has assembled the industry’s most comprehensive array of workflow solutions. To take the first step in improving how your direct mail communications are processed, learn more at: xerox.com/workflow
Get a Read on Inkjet for Publishing

Driven by transformations in market demands and technology advancements, publishing supply chains – including those for monochrome trade books, color trade books, and magazines – have undergone significant changes in recent years.

This trend will continue thanks to an evolving combination of digital production inkjet presses and finishing solutions that combine to drive cost out of book manufacturing as well as add value to publications in the form of personalized content.

Monochrome Books & Manuals

Digital printing has revolutionized the entire monochrome book supply chain by lessening the risks of mass production and offering a steadily increasing number of small and self-publishers faster time-to-market, reduced waste, and lower fixed costs. In this ever-changing market, inkjet is the technology you use to keep up.

Color Trade Books

When publishers can better manage the economics of color book production and keep more high-value titles in print, the color book supply chain can be more efficient. That’s where you – and your inkjet press – come in.

Production inkjet lets you drive cost out of the publishing supply chain via consolidation of equipment, workflow automation, and a decrease in run costs, waste and inventory. Inkjet economics, when combined with the ability to print on a range of offset coated and plain stocks, support a large percentage of short runs and reprints of color books and allow jobs previously offshored to be taken back by your organization.

Magazines

Magazines can be personalized in a variety of ways to better engage readership and meet the goals of publishers and advertisers.
A hybrid approach can be effective for color trade books, monochrome manuals and magazines. Many publications choose to print repetitive areas on inkjet while printing higher area coverage sections – like covers – on an offset or digital press. The two are then married in fulfillment or finished inline on a booklet maker.

When making the move from cut-sheet to continuous feed, it’s wise to take advantage of a much wider web to maximize paper use through imposition.

High area coverage apps – like publications and some color books – require treated or coated papers and longer drying time, which means slower press speeds. Make sure to plan accordingly.

Operator Tips
Process simplification is the key.

Xerox has developed the Xerox® Automated Book Factory Solution to help printers manage this transformational activity from beginning to end – simplifying each step and adding value for their publishing customers. When you bring of the components you need into one unified, automated solution, it makes color books production easy.

[Design Tips]

If printing black only be certain to test results. For best results, use either K-only or a “rich” black color that combines CMYK ink. It is particularly important to pre-test results if you are printing smaller text commonly found in technical manuals or books.

There can be some small inherent variability in the paper width of a roll. Make sure the design is safely within a few millimeters of the edge of the paper to prevent spraying into the press system.

When it comes to images, inkjet printing requires some consideration. Localized saturation is more common, so high-density images need to be positioned such that they don’t appear directly behind another high-density image, on the other side of the page. You can limit the amount of ink through color profiling or by changing drop sizes but it is still best to address the concern with image placement.
Printed catalogs are making a comeback in both B2B and B2C markets, and they are delivering profitable results. Brands are using them as a vehicle to strengthen loyalty, while driving online and in-store sales. Thanks to advanced personalization options, they’re seeing enormous success.

Personalization capabilities are certainly not new for catalogs; however, Xerox has created one unified and automated solution that brings all the must-have components for personalization, workflow, and manufacturing together, to make a much richer omni-channel experience that’s more cost-effective than ever before.

Popular personalization options:

- Covers or inserts with custom offers
- Imagery based on personal preferences
- Messaging based on past purchases
Smart Production Means More Postal Savings

High volume and savvy sorting both go a long way when it comes to earning the best postal discounts. Simply presorting by postal code can save thousands of dollars – and electronically co-mingling lower volume jobs not only improves operation efficiency, it can save you up to 22% on postage.

USPS Presorted discounts start at:

- Local Mailings over 5k
- In-State Mailings over 150K
- National Mailings over 250K

Co-Mingling

It’s common to use a third-party sorting company that aggregates mail from multiple customers who then share the savings, but that’s not always the best way to keep costs low – especially with inkjet in the mix. You can keep every cent of the savings for yourself by electronically merging multiple jobs that utilize the same stock and envelope and printing the shells dynamically. This allows you to print bank and credit card statements in the same print run as other applications, increasing your own sorted mail volumes.

House Holding

You can take it even further than electronic co-mingling by combining more than one statement or bill in a single document. This is a great strategy for banking applications, considering the typical consumer will have more than one account with the same bank. The most common is checking and savings accounts but they may also have a credit card, mortgage, or auto loan. Instead of sending four separate mailings that each require an envelope and postage, you can combine those documents in one print and mail run.
Design Tips

When designing for applications that can be co-mingled or house-held, make sure you use the same font, barcodes, and placement on the page for the address block. This will help to make sure the address shows perfectly in the envelope window, which makes it easier for the postal service to read.

Direct Mail applications that are larger in size typically see better response rates – but when you must keep costs down, it’s wise to fit within postal standards. This will help you avoid postage penalties and ensure speedy mail sorting. In North America, #10 envelopes are the perfect fit.
Inkjet is Outstanding, But it Isn’t for Everything

Production inkjet presses are designed to run high volumes of fully personalized content at a low cost. For applications like transaction printing, direct mail, books, trade publications, and catalogs, it’s an ideal solution – or an integral part of a hybrid production environment.

As ideal as inkjet is for some applications, it’s equally as unfitting for others. Some applications don’t lend themselves to inkjet production, including:

- **Coverage**: Those with the need for very high ink coverage
- **Paper**: Those with the need for stocks outside the media range inkjet can run
- **Size**: Those with physical dimensions that exceed the imageable areas of inkjet web presses

Time and experience make it easier to spot potential challenges and know immediately which technology would be most suitable for a job, but in the meantime, it pays to have an established evaluation process.
Use the checklist below to help determine if a particular application is a good candidate for inkjet printing. Regardless of the results, don’t forget to test the application before launching a full production run.

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<th>1</th>
<th>Take a look at the history of the job</th>
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<tr>
<td>If the file you’re printing has been built specifically for inkjet, that’s fantastic. However, if the file has a history of being printed on another type of press, its design may not be well-suited for inkjet printing.</td>
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<th>2</th>
<th>Review the resolution and color of every image and graphic</th>
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<td>Rich graphics with deep, dark colors can be a challenge for inkjet presses and put you at risk of oversaturation. Additionally, the color gamut is not as wide and colors are formulated differently. If you need to achieve a complex color range or match Pantone colors, you may want to consider other options.</td>
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<th>3</th>
<th>Consider the paper type</th>
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<tr>
<td>The size and weight of the media the job will print on is a determining factor in press selection. And when it comes to inkjet, your paper selection is more important than ever. You do have plenty of paper options, however, heavier stock requirements are almost never a good fit.</td>
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<th>4</th>
<th>Assess area coverage</th>
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<td>Applications with high area coverage, particularly those that overlap on both the front and back sides of a page, are not an ideal fit for inkjet.</td>
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Making the Switch
Offset

Coming from Offset: What You Need to Know

If you’re accustomed to printing with an offset press, you’re used to running high volumes of static documents with high quality results. Inkjet is an entirely different kind of press, intended for very different purposes.

Keep the following differences in mind:

Offset, xerographic, and inkjet printers each have their own unique ways of imaging. That technology is what determines each particular press’ capabilities and the level of quality you can expect/achieve.

Offset Presses
Method: Apply ink to metal plates that transfer images to your media
Advantages: Exceptional image quality and color consistency, great for high volume printing of a single document

Xerographic Presses
Method: Use high heat to fuse toner to paper
Advantages: Quick turnaround times, cost effective for shorter runs

Inkjet Presses
Method: Spray ink onto the page through thousands of small jets
Advantages: Quick turnaround times, cost effective for longer runs and variable data

Calculating Area Coverage

Area coverage is calculated differently for inkjet than it is for offset. With your offset press, you likely use a tool like APFill to calculate coverage – and since each color is spread across a separate plate, it calculates how much color each plate is using. Because the colors lay on top of one another, you can have a total maximum area coverage of up to 100%. Inkjet inks are delivered differently.

Calculating area coverage for inkjet. The logic built into the Digital Front End and print head controllers separate the colors using a variety of algorithms and colored drops of ink are placed next to one another, exactly where they need to be to produce the color you’re looking for. Tools like APFill don’t understand these algorithms and cannot be used.

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<td>Total area coverage</td>
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For an accurate approximation of how much ink a job should utilize, use Xerox ink estimation tools that are built into the Digital Front End. Just remember that because of how the ink is applied, the maximum area coverage is 400%.
Area coverage issues and resolutions.

Applications with high area coverage and rich graphics that overlap on the front and back can be particularly challenging for inkjet presses.

**Challenge:** Oversaturated paper

**Resolution:** Limiting ink area coverage to 50% is a recommended default ink limit when creating an ICC profile for most inkjet print engines. It works well for light to medium area coverage applications on baseline media (such as 90 gsm uncoated/untreated and inkjet treated stocks). It typically preserves gamut as well.

**Challenge:** Show through and finishing problems, when both sides of the page have areas of high coverage.

**Resolution:** Whenever possible, avoid having a lot of solid color in the same location on both the front and back sides of the page. You can also lower ink limit slightly on the less critical side.
Understanding gamut.

Both offset and inkjet use CMYK inks, but the way the inks are formulated are very different. These differences in dyes, pigments, and formulas can drastically change the achievable color range.

The amount of ink used has the most immediate impact on gamut. As more ink is used, the color becomes more saturated.

With inkjet, you must be careful about oversaturating. Using too much ink can cause image transfer issues for the print job you’re running and it may also cause machine reliability problems down the line. Paper cockle and curl issues are often attributed to oversaturation.

Spot color considerations.

Using spot colors is a relatively straightforward process for offset presses. You just create another plate and use the specific Pantone ink of your choice.

Inkjet needs to emulate spot colors from CMYK inks. To produce your spot color, the Digital Front End of the press will mix CMY&K based on a pre-determined recipe that is specific to that color on that press.
Use the standard profiles (if available) as a starting point. Create custom profiles by running a calibration for each paper type/drop size/resolution combination that is required when the standard profiles need modification. Digital calibration tools can graphically chart the gamut for each scenario.

Verify that your spot color is within your press’ range. Some Digital Front Ends have a spot color editor that allows you to make changes to the recipe. If you don’t have that capability, you can create a TRC curve to accomplish the same thing. If your customer is used to running offset shells, be sure to proof the migrated job on your new inkjet press to obtain approval on spot colors.
Coming from Xerography: What You Need to Know

When you have runs that require high-quality prints produced on standard paper types, xerography is a great solution. Some applications that work well on xerographic press can now be migrated to your new inkjet presses.

Even though aqueous inks have a different look and feel, in many cases there are adjustments you can make to achieve the desired output quality. Learn how to use your press properly and successfully achieve the quality level you’re looking for with the following tips.

Differences in quality.
With recent developments in imaging, the output quality of toner based presses has evolved to the point where it’s nearly indistinguishable from lithography.

The output quality of inkjet presses has come a long way, too. However, it may not be a suitable replacement for all toner-based jobs.

Color range considerations.
In xerographic printers, the color gamut is determined by many different factors including the usage and age of the press’ components. When developer and other items break down over time, it causes shifts in color.

Inkjet doesn’t use those components, so it holds its color once the paper-resolution-drop size combination is calibrated.

A few notes on format.
Not everyone realizes it, but web fed printers can run a surprisingly wide range of page sizes. In fact, in most cases they can run all the sizes a cut sheet printer can. Sheet fed xerographic printers typically have page sizes between 7” x 7” and 14” x 26” while many web presses can accept widths up to 20” and much longer lengths.

Design Tips
Aqueous inks may appear slightly muted when compared to xerographic prints. Try using different media, larger ink drop sizes, and a higher resolution to counter the difference.

Operator Tips
It may not seem like you need to calibrate once you set up your media combo, but it’s still a good idea to check occasionally.

Inkjet Insights
Each inkjet press is different. Get to know your individual press’ imageable area at various resolutions.
Because the paper on most inkjet presses is flipped over to print on the back side, the first printed side typically has its origin on the outside edge. Make sure the layout places the back side of each page in reverse order to adapt.

Depending on page size, you can often go 2,3 or more across the web for book blocks. Make sure to leave room for cut marks to properly align the cutter. Because the back sides are the same for every copy, the order they are placed in doesn’t matter.

If you have a variety of finishing needs, consider printing roll-to-roll and finishing the application offline. This way, if there is a problem with the finisher, the press can still create output.

For signatures, pad the signature with blank pages to ensure the set is correct and the new signature starts on a new front side.

Operator Tips

When you migrate smaller sizes, place multiple pages across the web for fast and cost effective throughput. Larger pages (like 14” x 26”) may need to be rotated 90° to fit. If you find yourself running several smaller sized jobs, it may be worthwhile to use a narrower stock. With low volumes, the cost to cut the roll down may outweigh the wastage cost.
White Paper-In Workflow

High volume content: typical workflow with offset shells.
Many printers will run shells on an offset press, then imprint the variable data portion of the job using a xerographic press. It certainly works but it’s a far more complicated process that involves more components, additional costs, and extra production time.

High value, high volume: typical whitepaper-in workflow.
When the production is streamlined with a whitepaper-in workflow, you eliminate steps which saves a significant amount of time and money.
Be More Agile and Cost-Effective With Production.

Inkjet offers a unique opportunity to drastically cut costs, while streamlining production. The goal of white paper-in is to use one type of stock for most your work. This will open your production schedule by essentially eliminating time consuming setup processes.
Paper Selection Makes a Big Impact

When it comes to inkjet, paper selection is incredibly important. The chosen paper has a direct impact on cost, overall quality, and production. It’s also a major factor in the final look, feel, and reliability of the document – which makes it the perfect starting point when setting the tone for design.

Inkjet Papers

There are a variety of paper types that have been specifically developed for production inkjet printing.

Best used for:

- **Uncoated & untreated (plain paper)**
  - Advantages:
    - Limited area coverage jobs (statements, invoices, text books)
    - Print jobs that don’t require a super high quality end result
    - Cost effective

- **Treated paper**
  - Advantages:
    - High area coverage jobs that don’t require an exceptionally wide color range
    - Helps minimize the amount of ink used to achieve the same color range
    - Improves production speed and efficiency

- **Coated paper**
  - Advantages:
    - Jobs that require premium color and image quality (direct mail, catalogs, and photo books)
    - Glossy or matte surfaces keep the ink at the top of the paper so more of the colorant is visible

Standard papers

Many inkjet devices on the market require that you use inkjet treated paper. That’s not always the case with Xerox® Production Inkjet Presses. In fact, traditional offset or laser “bond” type papers can work very well for many jobs.
If needed, calibrate each stock, resolution, and drop size, for the best outcome. The resolution and drop size have a direct impact on ink saturation, gamut, and quality, so calibrating to these parameters helps improve image quality.

Test paper stock for each job. Doing so ensures optimal quality and minimizes re-runs.

Store paper at a temperature of 68°F/20°C to 76°F/24.4°C and maintain a relative humidity of 35 to 55%, as the relative heat and humidity in the production room and storage areas affect the behavior of media.

Reliable consumables are just as crucial to your production operations as reliable equipment. Using the right paper can determine whether the job is done right, the first time.
Effective Use of Color & Ink: What You Need to Know

No matter what kind of press you’re using, there’s no question that the color reproduction is a top concern. With an inkjet press, your output can be excellent with proper planning and preparation.

When matching colors, inkjet-based platforms are far less forgiving than toner. This means it is important to have a good color management policy in place before you start printing.

RGB & CMYK

You don’t have to convert RGB resources to CMYK but it’s a good idea to verify that the colors you use fit in the press’ color range.
Indexed colors

The amount of simultaneous colors allowed per image is limited. 4 or 16-color palettes are acceptable for icon-sized images but can’t be used for larger images.

For graphs and images, use non-AFP formatted resources and embed them in Object Containers.

When creating Advanced Function Printing (AFP) resources, indexed color can be a good way to simplify using RGB and CMYK.

Spot colors

Some spot colors may be outside the range of CMYK, and you may need to make trade-offs to manage your end clients’ expectations.

If the spot color does fall into the press’ color gamut but doesn’t look right, you can tweak the recipe on the press to achieve the designer’s desired result. Remember, paper also affects how colors appear.
Rich black

Using pure black inks may cause images and text to appear dull and flat. Adding CM&Y produces a richer black – but is more expensive. It’s best to use rich black when the text or image needs to look more vivid.

Operator Tips

Using rich black can help with minor registration or trapping issues.

Solid areas

It a jet is dirty or clogged, it can cause a line that visibly shows the process direction of the paper. This is especially true for solid color areas, so it’s best to limit those, whenever possible.

Operator Tips

Large, repeating areas of colors that use a lot of CMY or K, can cause any inkjet head to not have enough ink to print. To make sure the ink is there the press may have to run at a reduced speed.
Gradients

Gradients achieve relatively large areas coverage without using too much ink. Just remember, inkjet is digital. Color bits are turned on and off, which can create a “calendared” or banded look if you’re not careful.

To avoid calendaring, choose a relatively close gradient range and stay within 20 – 30% over several inches. Adding a slight pattern also helps.

Transparency

PDF transparency is complicated. In fact, RIPs and presses sometimes have problems printing PDFs with transparency. To help, you can either to rasterize the image or apply vector transparency flattening to the PDF.

Always test images with transparency on a colored background to see if it renders.
Whenever possible, try not to have your tint be less than 15% of the solid color. Anything less can have defects or not show up (especially with yellows). Adding a slight pattern can help.

Always test tints to make sure they appear as the designer intended.

When it comes to ink, you’ve got options.

Just make sure that your ink selection is a good match for the paper you’re using.

**Aqueous Dye Ink**

**Benefits:**
- Vibrant
- Exciting look
- Relatively low consumable cost

**Considerations:**
- Takes longer to dry
- Tends to fade quickly
- Likely to smear if liquid is spilled on it

**Aqueous Pigmented Ink**

**Benefits:**
- Shorter drying times
- Image permanence
- Works well on a variety of paper types
Understanding the Big Picture

Resources like graphics and images can make or break the effectiveness of an application. With inkjet, smart design and pre-press work go a long way. Use the following tips to get the picture you want – and the quality the job demands.

If there is an image you use often, cache that image. Caching allows the RIP to process and store the image in memory, so it can be used again without reprocessing.

PDF files within AFP pages do not natively support Pantone spot colors. TIFF and PNG images do.

Mathematically align your graphics and images’ number of dots with the resolution of your press. 72 dpi images look great on your monitor but won’t print well.

300 or 600 dpi resources work best. 300 dpi provides good quality while using less memory. 1200 dpi adds processing time without any significant improvements in quality.
Get It Right, Right From The Start

When a file is properly designed for inkjet, there are significant benefits for the production process and overall output quality. Designers and agencies should comprehend inkjet’s unique characteristics right from the start of any job.

To optimize appearance and productivity, follow these best design practices for resource and data files:

**Design Tips**

- Use non-AFP formatted resources for graphs and images.
- Verify the colors in your resources fit in the press’ color range, particularly when using a RGB color model.
- Adhere to design standards (Ghent Working Group standards for PDFs and AFP Consortium specifications for AFP/IPDS) to prevent extremely large file sizes. This allows the press to operate as efficiently as possible.
- Understand that just because most inkjet platforms accept all standard image formats, that doesn’t mean they will render correctly or in a timely manner.
- Avoid using rasterized text or line art.
- When a barcode is required, use a barcode font for better scanner readability. Barcodes created as images are susceptible to artifacts and improper scaling.
- Create Pantone® colors as spot colors for the best possible match. Renaming may not convert them to CMYK.
Font file placement options

LOCAL: Store on the press (if possible) to reduce print file size.

IN-LINE: For data streams, like AFP/IPDS, that have a continuous dialogue with the press and can be centrally managed.

EMBEDDED: Place in the print file to ensure the font is correct and always available. This also minimizes the number of licenses needed for multiple presses and safeguards against jobs failing on font issues.
Setting Up For Success

Between design and production is the very important prepress process. Digital inkjet prepress has many of the same steps as offset prepress, without plate making, typesetting, and color separation of course. It has even more in common with digital xerographic prepress.

As you well know, incorrect file formats, missing or corrupted fonts or resources, unfitting image resolutions, and data errors can be incredibly costly mistakes. Employ the prepress process to make sure a file is optimized for fast, cost effective inkjet printing. **The inkjet pre-press process:**

---

### Operator Tips

#### Preflight
Find errors and identify missing resources.

Utilize Acrobat Pro or a comparable plug-in tool, like PitStop Pro. Run the "Analyze and Fix" feature in the Acrobat preflight tool to find and correct common issues, like missing embedded fonts or improper spot color settings. It also helps to check to make sure ICC profiles are tagged to objects in the PDF.

Check for PDF/X-4 compliance using these built-in profiles:
- Acrobat X – Sheetfed Offset (CMYK)
- Acrobat XI – Sheet CMYK 2012

---

#### Manage Color
Ensure the color you get at print time matches the color you expect.

Be sure your monitor has been calibrated and profiled if you are correcting color. Also, ensure the Color Management settings for the Adobe® Creative Suite® are synchronized.

Don’t assume a visual assessment is enough. Most documents need a more thorough inspection, especially when brand colors are being printed.

Honor each image’s source color for best color fidelity. Save the color conversion as late in the process as possible.

---

#### Imposition
Make effective use of the print

Impose jobs using the press’ on-board imposition tools that take single pages from the application and lay them out without productivity degradation. Imposing from the DFE provides flexibility without affecting performance.
Use the DFE’s on-board ink estimation tool by RIP-ping the job before printing to determine ink usage before production.

Operator Tips
Proof a sampling of the application on your inkjet press, even if the user has signed off on the job. You may spot previously unseen artifacts or see anomalies that can be corrected through calibration and density optimization on the press.

Operator Tips
Generate proofs
See exactly what the printed piece will look like.

Operator Tips
Estimate costs
Project how much ink and other consumables will be used in printing.

Output to the press:
Schedule the print job to run.

See exactly what the printed piece will look like.

Generate proofs
Proof a sampling of the application on your inkjet press, even if the user has signed off on the job. You may spot previously unseen artifacts or see anomalies that can be corrected through calibration and density optimization on the press.

Estimate costs
Project how much ink and other consumables will be used in printing.

Output to the press:
Schedule the print job to run.
Test for quality and consistency. Before a job is released for production, it’s a smart idea to make sure both the press and print file are ready to run together. Use these 5 test points to obtain a good idea of how the job will run and look.

### Is this application a fit for inkjet?

#### Quality & Consistency Checklist

<table>
<thead>
<tr>
<th></th>
<th>RIP PERFORMANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Time how long the job takes to RIP. Does it keep up with the speed of the press? If not, you may need to RIP then print rather than RIP-ping while printing, to keep the press running at rated speed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>LAYOUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Make sure the entire job fits on the web as expected. Also, make sure any top of form or cue marks have clear zone around them and are not impacting the printed document. Adjust the alignment as needed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>DENSITY ACROSS THE WEB</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Run a density optimization routine on the press if one side of the web doesn’t have the same quality as the other.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>OVERALL IMAGE QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Are there any artifacts? Are transparencies and drop shadows rendering as expected? If not, flatten the images before sending to print.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>THROUGHPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Verify the paper stock runs well, at the press’ high speed. If it doesn’t, slow the press until it does. This may require trial and error.</td>
</tr>
</tbody>
</table>
Xerox® Brenva® HD Production Inkjet Press

The Xerox® Brenva® HD Production Inkjet Press is engineered for quality output at the lowest possible cost. A cut-sheet platform with the economics of an inkjet press, Brenva allows you to introduce more color into applications, reduce storage costs for offset shells, offload unneeded high-end presses, and consolidate your workflows, and floor space. To make the most of its technology, consider the information and tips below.

Key specifications for designers and operators:

<table>
<thead>
<tr>
<th>Paper Specs</th>
<th>Print Resolution/Image Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min page size:</td>
<td>Resolution: 600 x 600 spots per inch with multi-bit vector half-toning</td>
</tr>
<tr>
<td>Max page size:</td>
<td>Drop sizes: 4 distinct drop sizes (Small, Medium, Large, Max)</td>
</tr>
<tr>
<td></td>
<td>Max image area: 13.11” x 20.25” / 333 mm x 514 mm</td>
</tr>
</tbody>
</table>
Xerox® Brenva® HD Production Inkjet Press

How To: Achieve the best quality/cost balance

The Xerox® Brenva® HD Production Inkjet Press is built to provide the highest quality-to-cost benefits. Understanding how to use color effectively, printing on the correct stock or paper type for a job, and using the tools provided are important pre-print considerations.

In general, direct mail and publishing applications demand a higher print quality and use more ink. Choosing the right settings for the application you are running will optimize both costs and results.

Create a custom profile to further manipulate the quality/cost balance for demanding customers.

Get smooth, crisp text/graphics and output that reflect spot color and CMYK industry standards by choosing a default (or customized) profile that is right for every job.

Provide the highest quality at the lowest cost.

<table>
<thead>
<tr>
<th>Paper Type</th>
<th>Drop Size</th>
<th>Ink Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose the correct paper profile (Inkjet Treated, Uncoated or Uncoated/ Untreated)</td>
<td>Drop sizes are established by pre-loaded or custom profiles, by media type</td>
<td>Ink limits are automatically set by the default profiles, and coverage is paper dependent</td>
</tr>
<tr>
<td>Each paper type has multiple image quality (IQ) settings ranging from premium to draft, which can be easily controlled by the drop size selection</td>
<td>If you select one of the default profiles, your settings will be maximized for the paper type you’re using</td>
<td>50% maximum ink coverage per page is recommended</td>
</tr>
<tr>
<td></td>
<td>Lighter tints are recommended for solid areas (versus darker tints)</td>
<td>Ink limits can be adjusted within an acceptable range when creating custom profiles</td>
</tr>
<tr>
<td></td>
<td>Smaller drops work best when printing high coverage documents</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Selectable Drop Size</th>
<th>Quality/Cost Tradeoff</th>
<th>Gamut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>Low contrast, low vibrancy/low cost</td>
<td>Low</td>
</tr>
<tr>
<td>Medium</td>
<td>Balanced toward cost</td>
<td>Medium Low</td>
</tr>
<tr>
<td>Large</td>
<td>Balanced toward image quality</td>
<td>Medium High</td>
</tr>
<tr>
<td>Maximum</td>
<td>Dark text, high vibrancy/higher cost</td>
<td>Highest</td>
</tr>
</tbody>
</table>
How To: Use color effectively

The Xerox® Brenva® HD Production Inkjet Press print engine and Xerox® FreeFlow® Print Server work together to provide outstanding color quality without the need for advanced color management skills.

You can choose from four standard rendering options. For best results, always run your press with Color Management.

<table>
<thead>
<tr>
<th>Saturation</th>
<th>Best for business graphics, such as charts and graphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptual</td>
<td>Best for the rendering of photographic images, preserves the visual relationship among colors as they are perceived by the human eye. All or most colors are proportionally scaled to fit the output gamut, but their relationship does not change.</td>
</tr>
<tr>
<td>Relative Colorimetric</td>
<td>Best for the rendering of spot color and logos. Colors that fall within the Output Color space remain the same. Only colors that fall outside are changed to the closest possible color within the Output Color space.</td>
</tr>
<tr>
<td>Absolute Colorimetric</td>
<td>Optimizes the rendering of spot color and logos by identifying the closest value within the printer gamut.</td>
</tr>
</tbody>
</table>

Printing in black only.

You’ll save on ink costs when you print in K-only, grayscale or spot colors defined as K-only.

Your press gives you a lot of flexibility when it comes to printing K-only, with additional cost and quality controls for Small Text, Large Text, Images and Graphics. Object oriented rendering treats each of these items differently within the same document, in the same run.

- **Preserve K-Only**: Outputs K ink only, without any C, M or Y
- **Darken**: Sets the GCR to the maximum limit
- **Smooth and Darken**: Applies Gray Color Replacement (GCR) when C, M and Y reach a specific total area coverage, improving the appearance of mid-tones
- **K-handling settings** can be used for K-only and grayscale input files, or spot color files where the spot color is defined as K-only
- **Use process black (CMYK)** to achieve optimal smoothness whenever possible
Built for performance, efficiency, and flexibility, the Rialto® is a remarkable inkjet press with incredible potential. Like any press, it does have its own unique specifications and idiosyncrasies, so make sure to keep the following information in mind to optimize your output and experience.

**Key specifications for designers and operators:**

<table>
<thead>
<tr>
<th>Paper Specs</th>
<th>Application Specs</th>
<th>Trimming Specs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max roll diameter:</td>
<td>Min page size:</td>
<td>Can print to:</td>
</tr>
<tr>
<td>40&quot; / 100 cm</td>
<td>5.83&quot; x 8.26&quot; / 148 mm x 210 mm (A5)</td>
<td>.5 mm of edge</td>
</tr>
<tr>
<td>Min web width:</td>
<td>Max page size:</td>
<td>Head and foot trim:</td>
</tr>
<tr>
<td>8.26&quot; / 210 mm</td>
<td>8.66&quot; x 17&quot; / 220 mm x 432 mm</td>
<td>8.66&quot; x 17&quot; / 220 mm x 432 mm</td>
</tr>
<tr>
<td>Max web width:</td>
<td>Min border:</td>
<td>Side trim:</td>
</tr>
<tr>
<td>9.84&quot; / 250 mm</td>
<td>.5 mm</td>
<td>6 mm to 21 mm on each side. Max combined trim is 40 mm</td>
</tr>
</tbody>
</table>
**How To: Manage layouts, bleeds, and edges**

Rialto is a narrow web continuous feed inkjet press that requires a cue mark – which can create challenges, if you don’t plan accordingly.

<table>
<thead>
<tr>
<th>Narrow Web Layout Basics:</th>
<th>Bleed Edge Printing:</th>
<th>Minimizing Cue Mark Impacts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieving bleed edge requires a web size that is wider than the final application</td>
<td>Top and bottom bleed edge are performed by the guillotine blades</td>
<td>Cue mark Silence Areas will infringe on design content that bleeds</td>
</tr>
<tr>
<td>Typical bleed edges in a design are about .29” on each side – Rialto can trim from 6 mm to 21 mm on each side</td>
<td>Bleed edge, or side trim, is performed by integrated side edge trimmers</td>
<td>The Silence Area will be visible as white knockouts at the top and bottom of the page</td>
</tr>
<tr>
<td>Cue width: 6 mm (.236”)</td>
<td>Without bleed edge trimming, Rialto can print as close as .5 mm from the edge – however, it is recommended to print no closer to the edge than a manufacture’s stated paper width variation</td>
<td>Thoroughly check an application for sensitive information in the area of knockout before committing to a production run</td>
</tr>
<tr>
<td>Chip height: 4 mm</td>
<td>A 1 mm edge is a potentially good alternative to inline/offline bleed edge trimming, as it can significantly reduce costs and waste when switching to smaller width paper</td>
<td></td>
</tr>
</tbody>
</table>

**Silence Area Knockout Workarounds:**

**Face down printing:** If the bleed occurs on side one of the application, simply change the Duplex Layout Mode to face down

**Change imposition and resize:** If knockout impedes sensitive document information, create an imposition template that allows the content to be resized to fit within the non-knockout area

**New document design:** When designing an application for Rialto, minimize bleed designs within a 5 mm x 10 mm area of the top and bottom/front and back of each inboard portion of the page

**Alternative to side edge trimming:**

Print within .51 mm of the page sides
How To: Dial-in area coverage for optimum output

Rialto uses an aqueous pigment ink and there is a general need to strike an optimal balance between ink and paper, as too much ink can create undesired results. Make sure to keep the following in mind:

- Applications with high area coverage or rich graphics that overlap on the front and back can be particularly challenging.
- High area coverage with light tints or colors will be less problematic than dark colors.
- Limiting the amount of ink is a critical strategy to maintaining image quality, mitigating the potential for paper defects, and reducing costs.
- Without any ink limitations applied, Rialto will default to a total ink coverage of 270%, which is excessive for most applications on baseline paper.
- Reducing the amount of ink applied can lower the chances of bleed through/show through on lighter weight media and keep ink costs low when gamut and color matching is not a requirement.
- When gamut and color matching are requirements or maximum color vibrancy is needed, 170 – 240% coverage is appropriate.
- When creating an ICC profile for either Rialto print engine, 170% is the recommended default ink limit – this works well for light to medium area coverage applications on baseline media and typically preserves gamut.
- For “black only” or grayscale printing, ensure that Background Spray and Flush Lines are both turned on.
How To: Make the finishing process easier

Optimal Stacking

There should be a white margin at the top of each application page. Applications with high area coverage at the lead edge of the document may have trouble stacking, given the pile height of ink in one area.

The problem: As the stack height increases for an application with a repeating area of lead edge content, the quality of the stack may diminish and could result in loss of quality and stack integrity.

The solution: Change the orientation of the page so that the high area coverage is at the trail edge. In the Rialto GUI, under Imposition, change the orientation to Reverse Portrait.

Managing Ink Coverage Differential

Applications that have significantly heavier ink usage on one side of a sheet versus the other will stack optimally when the side with the greatest amount of ink is face down in the stacker.

The problem: The normal print order for applications on Rialto is 1 to N, face up. This means that page 1 of an application will be face down in the stacker. Heavy, repeated ink usage on the second side may create quality issues.

The solution: For a 2-page application, in the Snapshot Job Settings, change the Duplex Layout Mode from Face Up to Face Down.

A Change the print order to N to 1 and the Duplex Layout Mode to Face Down
B Minimize the stack height starting at 2000 pages or less and adjust accordingly
Xerox® Trivor® 2400 Inkjet Press

The flexibility built into the Trivor 2400 allows you to minimize the cost, image quality and productivity trade-offs you would otherwise have to make with a one-size-fits-all system. You can optimize attributes on a job-by-job basis with choices of resolution, drop size and variable press speeds – and the press’s expanded media range makes it possible to run higher value applications.

Key specifications for designers and operators

Print Resolution

Trivor offers three resolutions to suit application requirements. When selecting resolution, it’s important to keep in mind the productivity relationship. The higher the resolution, the slower the speed of the press. The lower the resolution, the higher the speed of the press. Increased resolution provides better image smoothness, higher color density / darkness, and larger gamut.

<table>
<thead>
<tr>
<th>Resolution (DPI)</th>
<th>Low Speed High Quality</th>
<th>Optimal Speed Optimal Quality</th>
<th>High Speed Medium Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggested Applications</td>
<td>1200 x 600</td>
<td>600 x 600</td>
<td>360 x 600</td>
</tr>
<tr>
<td></td>
<td>Higher coverage direct mail</td>
<td>Books, direct mail, high coverage transaction</td>
<td>Basic transaction, low coverage direct mail</td>
</tr>
<tr>
<td>Print Speed</td>
<td>164” per minute (50 mpm)</td>
<td>328” per minute (100 mpm)</td>
<td>551” per minute (168 mpm)</td>
</tr>
<tr>
<td>Impression Speed</td>
<td>716 letter/min (673 A4/min)</td>
<td>1,431 letter/min (1,347 A4/min)</td>
<td>2,405 letter/min (2,263 A4/min)</td>
</tr>
<tr>
<td>Monthly Volume (M)</td>
<td>Up to 17 million impressions (repeat for each in row)</td>
<td>Up to 34 million impressions (repeat for each in row)</td>
<td>Up to 57 million impressions (repeat for each in row)</td>
</tr>
</tbody>
</table>
Drop Size
Trivor gives you a choice of five drop sizes. Select a larger drop size for low resolution in order to achieve a suitable density. For high resolution, use a small drop size to avoid over-saturating the page or create drying issues. Drop size is directly related to the amount of ink used, therefore, if you are looking to optimize ink consumption with a slight image quality/density tradeoff, you may select a smaller drop size.

Paper and Print Areas

Weights:
Trivor is optimized to print on 52 – 160 gsm paper

Papers outside that range have been successfully run through the system (as low as 40 gsm and as high as 230 gsm)

While the press is capable of running lightweight and heavyweight papers, it cannot run both at the same time – due to print head height differences

Have your Xerox service representative set up your system to enable the media weights most commonly used

Blank Pages:
When cycling up (at the beginning of each job or after stopping for any reason) the system can start re-printing within 8 – 12” (20 – 30 cm) of the web moving (representing the waste) – if the next job can be printed immediately after the prior without clearing the paper path

If the complete paper path needs to be cleared before the next job can be printed, the amount of paper used will vary based on the on pre- and post-processing equipment setup inline – Trivor uses approximately 52’ (16 m) to re-web through the press at startup (such as when switching to a new roll)

Spooling of jobs and maintaining a full print queue of batched jobs “ready to print” will eliminate the need for the system to print blank pages between jobs and blank pages will not be billed on the billing meters

Billing Meters:
When compared to other Xerox products, Trivor has unique counters and there are a variety of ways to measure production

When reporting the displayed print volume counters for Xerox billing, the metered units are in linear feet

The system analyzes each image received by the print head and determines whether pixels are present in the document layout and then reconciles the layout as multiples of 12 inches of web travel for billing meter purposes

The system differentiates between monochrome pixels and color pixels – when only monochrome pixels are detected, only the monochrome counter is incremented and when at least one additional color is detected, the color counter is incremented (if no pixels are detected none of the counters will be incremented)

Papers outside that range have been successfully run through the system (as low as 40 gsm and as high as 230 gsm)

Have your Xerox service representative set up your system to enable the media weights most commonly used

Size:
All papers should be between 8’ (210 mm) and 20.08’ (510 mm) wide

Maximum print width is 18.66’ (474 mm) for all wide web printing

Printing can be within 1 mm to the edge of the paper

Maximum print length is dependent upon on the Digital Front End used and the print resolution (refer to the Customer Expectations document for your configuration)

Cut length in practical situations may be slightly different from the precise final document page height due to finishing requirements – for example, A4 documents are sometimes imposed with a cut length of exactly 12” (305 mm) and post-processing steps will then trim the document precisely

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About Xerox

Xerox is an $11 billion technology leader that innovates the way the world communicates, connects and works. Our expertise is more important than ever as customers of all sizes look to improve productivity, maximize profitability and increase satisfaction. We do this for small and mid-size businesses, large enterprises, governments, graphic communications providers, and for our partners who serve them.

We understand what’s at the heart of work – and all of the forms it can take. We embrace the increasingly complex world of paper and digital. Office and mobile. Personal and social. Every day across the globe – in more than 160 countries – our technology, software and people successfully navigate those intersections. We automate, personalize, package, analyze and secure information to keep our customers moving at an accelerated pace. For more information visit www.xerox.com.