Xerox® Versant® 180 Production Press

White Paper

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The Xerox® Versant® 180 Production Press

The Versant 180 is the latest model in the Xerox® Versant Family of 4-color, cut-sheet production presses. This state-of-the-art digital printing system provides an excellent option for meeting your company's production requirements. Is this press best suited to your business? We know that a digital press is a large investment and you want to make the right decision—a decision that delivers the best results to your business and your bottom line.

As you know, deciding on the right press is not easy. There are many products available and they all claim to meet your needs. In addition, the industry has many options, each with an over-abundance of product information, cryptic technical descriptions and confusing terms. It's a lot to wade through.

To help you appreciate the Versant 180 and understand its key features, this paper summarizes the essential technical facts that can make a difference to your operation. Armed with these facts, you'll be better able to choose the system that works best for you.

The Versant 180 is a consistent performer in the mid-production range, and ideally suited for smaller to medium-sized print shops and enterprise environments. This press is built with robust components for dependable high-speed printing at an average of up to 80,000 prints per month. Moreover, the Versant 180 delivers a unique suite of automated workflows, run-time features and production support tools to make it an ideal choice for busy print shops that need to deliver more high-quality jobs and deliver them in less time.

Advance, Automate, Do More.

If you are a mid-sized print provider struggling to grow your business in the rapidly changing digital print marketplace, you know that success requires more than perseverance. It requires a good strategy—a way to drive results and make growth happen. The Xerox® Versant 180 offers an expedient solution for strategic growth. Whether you're new to this challenging marketplace or ready to take your successful printing operation to the next level, the Versant 180 can work for you.

With the Versant 180, you can Advance, Automate and Do More. The key is Automation. In the printing industry, the term "automation" is frequently used, and we often take it for granted. But what does it really mean? Put another way, how do you value your time? Like most business owners or managers, you know that time management for a company makes the important difference between mediocre performance and excellence in execution. For a business, time really is money. It's a resource to be mindfully managed.

Time management is a predominant theme in all Xerox® print production technology, and thoughtfully built into our presses. We take it seriously, and make it work to help businesses like yours grow, even in challenging times. The Versant presses are designed and built with some of the best of this technology—features that put time to work for you, instead of against you. The Versant presses will actually help you manage time in your shop without you having to be present and monitor the work!

What are these important automated tools that can help you reach high levels of productivity, and deliver reliable results? Some are fully automated and working under the

covers of the press, while others require an operator mouse-click to initiate a function; but they all span the production workflow from job submission to finishing, and they all save operator time and preserve up-time for the press.

Without these tools, procedures take much longer, the press is down too long and too often, and there is more waste and re-printing because of operational errors. In addition, very often operators simply do not calibrate the press or create profiles for stock because the steps are too complex or they don't want to take the time needed for long procedures. The result is unreliable and inconsistent output that may not satisfy your customers.

The automated tools on the Versant® presses can help transform a careless print shop culture into an efficient one that delivers quick job turns with faster setup and the ability to achieve stable, consistent and accurate print quality. For example, when operators learn that they can perform calibration with two mouse clicks, one to start the process and one to accept the results—and it takes only two minutes and not twenty minutes—they will do it daily and take pride in the IQ results. They will gladly profile a new stock because this process also takes only two or three minutes, and requires just initiation and acceptance at the end of the process. Other built-in tools let the software do the work, and require no operator intervention, no complex steps and no difficult decisions.

A summary of key automation on the Versant 180 includes the following tools that accomplish rapid workflow setup, efficient job processing, precise paper transport, accurate and painless color management and consistent IQ support and management:

- **Automated Color Quality System (ACQS)**—ACQS is advanced color management software that transfers the complex decisions about color maintenance from operators to an automated system, and eliminates the time and error associated with color management. Once initiated by an operator, ACQS automates the printing and measuring of calibration charts and then calculates and makes precise adjustments to color tables based on the results.
- **X-Rite® Inline Spectrophotometer (ILS)**—This scanning device is built into the paper path where it measures XRGA spectral data (X-Rite Standard for Graphic Arts) and hands that data over to color management software (ACQS) for print server calibration and stock profiling. It ensures stable, accurate and repeatable color and eliminates the need for operators to use a time consuming hand-held spectrophotometer. It is available with the Versant 180 Performance Package.
- **Automated Image Caching and Parallel RIPing**—These job processing functions occur automatically during the RIPing process on the print server, and they improve the overall print time. Images that appear many times in a file are stored for re-use instead of being rasterized at every occurrence. In addition, the file is broken down into the most efficient parts and each part is assigned to a different processor so that processing can occur concurrently.
- **Automated Run-Time Color Controls**—A subsystem of closed-loop process controls works continuously during printing to automatically maintain color consistency and color-to-color registration throughout a print run. Color patches and registration marks are placed on the image carrier between every impression. These patches are then continuously measured during a job and adjustments are made automatically by the press, as required. The result is higher color quality and consistency with no operator involvement.
- **Automated Sheet Decurling**—A single-pass Decurler automatically removes any up or down curl as paper exits the print engine. This delivers flat sheets for consistent and error-free finishing. The decurling process is automatically computer controlled using data such as the paper weight being used and the temperature and humidity of the press environment.

- **Easy Job Submission**—Job submission is flexible and fast with a variety of tools from standard PC and Mac® print drivers to faster and more automated methods like Web submission and custom Hot Folders.
- **Job Management with Pre-Set Queues and Virtual Printers**—All Versant® 180 print servers support automatic job processing through pre-set queues or virtual printers that assign print parameters to files automatically after job submission. Once the queue or virtual printer is set up, all processing is automatic. Combining this feature with Hot Folders means that users can drag a print file to a folder on their desktop and the workflow is automatic all the way to finishing and stacking.
- **Integrated Registration Alignment (IRA)**—Using a combination of proprietary technology, the IRA automatically gives you remarkable registration—making Versant registration easy, accurate and automated. IRA uses image processing called IreCT, which automatically—with extremely high accuracy—adjusts the placement of images on the printed page. Using a dedicated integrated circuit, IRA calculates and computes the best output possible, taking advantage of advanced paper transport components on every sheet—automatically. When used in conjunction with Simple Image Quality Adjustments (SIQA), your Versant 180 becomes even more capable—allowing you to produce higher quality jobs faster and on more media types for better output and less waste.
- **Simple Image Quality Adjustment (SIQA)—Automated Density Uniformity Adjustment**—This tool adjusts print engine tables to ensure that toner is deposited uniformly and consistently across the surface of each page—from the inboard side to the outboard side. In a few minutes, you print and scan CMYK and RGB targets and the software automatically adjusts Raster Output Scanner (ROS) settings.
- **Simple Image Quality Adjustment (SIQA)—Automated Image Transfer Adjustment**—This tool corrects for mottle (uneven toner coverage) and color shift, which can occur on heavyweight stocks. Once initiated, the tool automatically creates and saves an adjustment to the Bias Transfer Roll, which is the xerographic component that transfers the image from the belt to the paper. The tool eliminates the need for operators to interpret printed targets and manually enter adjustment values. Once created for a stock, the adjustment is saved and can be either assigned to the stock for automatic use or manually selected for the stock for a print run. This gives the operator precise quality control for all jobs and all supported media. You'll get the same high quality regardless of stock type—even on linens, polyesters and other unique substrates.
- **Simple Image Quality Adjustment (SIQA)—Automated Image-to-Media Alignment**—This tool generates an individual alignment profile for each stock/tray combination selected to ensure that images are placed correctly on the media. You can create up to 50 profiles and each created profile is automatically used each time the associated stock is used, ensuring optimal print quality.
- **Custom Paper Settings Define the Best Settings for Stock**—The Tools menu on the Press Interface lets your operators create individual settings for different media used in the press. Once the settings are created, they can be selected for any feeder tray by the operator. These custom settings let you control a wide range of technical settings in the press for any print job using them. Custom Paper Settings include adjustments for Alignment, Paper Curl, Tray Air Assist, Image Transfer, Regi-Loop, Image Transfer for Trail Edge, Paper Speed at Transfer Module, Fuser Temperature and Tray Heaters. A profile can be created for one or a set of these adjustments. These Custom Paper Settings place instant quality control in the hands of the operator with a simple menu selection for a stock. Operators thereby ensure that the output on all stocks reflects the best image quality possible.

More Results with Versant® Automation

The Versant 180 is designed with robust and field-proven components that deliver more results from job to day, day to day, and month after month. By automating key production processes with more performance, more image quality and more versatility, the Versant 180 will deliver more results for your business. The following descriptions provide a summary of the key technologies in the Versant 180 that deliver more results.

More Performance

Print Speed of 80 pages per minute (ppm)

With a print speed up to 80 ppm, the Versant 180 delivers a consistent Average Monthly Print Volume (AMPV) up to 80,000 prints. If your production requirements fall in this range, then the Versant 180 is your best choice. The duty cycle is 750,000 pages per month.

Auto-Duplex up to 300 gsm

The Versant 180 can auto-duplex both coated and uncoated stocks with sheet weights up to 300 gsm. With this feature, applications such as business cards, greeting cards, ID cards, signs, posters and menus can secure extra revenue. Also, the Versant 180 supports a wide array of substrates including linen, poly, vinyl and magnet stock.

Latitude in Stock Sizes, Weights and Types

The Versant 180 supports coated and uncoated paper with these specifications:

Size Range

- Maximum Size: 13 x 26" (330 x 660 mm)
- Maximum Standard Sheet: 13 x 19.2" (330 x 488 mm)
- Minimum Size: 3.9 x 5.7" (98 x 146 mm)

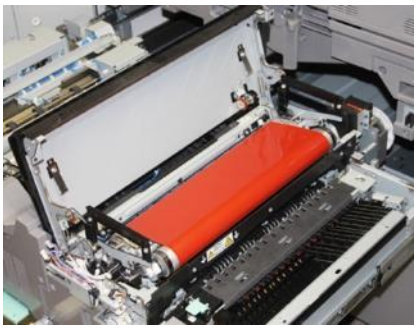
Weight Range: 52–350 gsm uncoated and coated

- 52–256 gsm from Trays 1–3
- 52–350 gsm from Bypass
- 52–220 gsm from optional HCF
- 52–350 gsm from optional OHCF
- 52–350 gsm from optional Adv OHCF

Type of Media

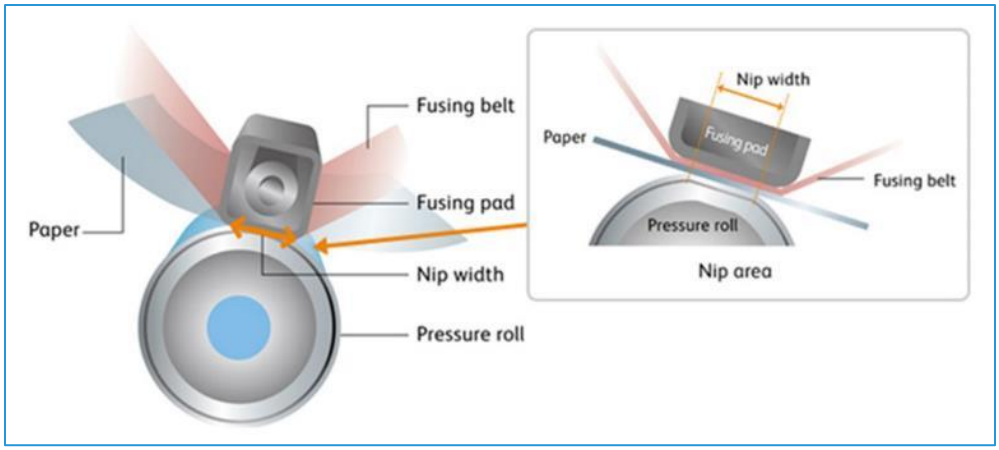
- Coated and uncoated paper
- Tabs
- Labels
- Envelopes
- Transparencies
- Special substrates such as linen, poly, vinyl and magnet stock
- Special media such as business cards, greeting cards, ID cards, signs, posters and menus

Advanced Fusing Technology



The Versant® 180 uses a Compact Belt Fuser. This important component supports a diverse range of paper types and can print at high speeds while maintaining high image quality.

The fuser uses two heat rolls located inside the fusing belt. By using a fusing belt with a low heat capacity, the belt can be heated using the minimum amount necessary for toner fusing. Also, because of the large area of contact between the heat rolls and the fusing belt, the belt can be efficiently and uniformly heated to the required temperature. Once toner fusing is complete, the two heat rolls replenish the heat that was lost through fusing to maintain a constant fusing belt temperature, and this achieves consistent image quality. This process makes it possible to print continuously, even on heavyweight paper, without the fusing belt temperature falling. The result is consistent image quality at very high speeds.



Fuser Belt Pressure and Heat Control

Toner is fused onto the paper by applying both heat and pressure. The paper passes between the fusing belt and a pressure roll, where it undergoes rapid heating under pressure as the toner is fused to the paper. The heat needed is generated through a series of lamps in the pressure pad and in rolls within the fuser belt assembly. Pressure is applied by the fusing roll, which deforms slightly beneath the paper. The area of surface contact is called the “nip.”

The Versant Family features a newly designed fusing pad that is flat. The flat surface of the fusing pad results in a larger nip area for contact with the paper during the fusing process. This has a number of important benefits.

- First, pressure is applied more evenly over a larger surface area as the toner is fused. As a result, stress on the paper is reduced, and so is the likelihood of deformation in the paper. This is particularly important for coated paper, which can sometimes blister in the fusing process.
- Second, special stocks like envelopes are less likely to wrinkle in the fusing process. This means that a wider range of stock types can be handled by the press with excellent results.

This compact belt fuser is designed for long life. The assembly is a customer replaceable unit for Key Technical Operators who have been trained by Xerox. By training a local operator, you can avoid a service call and keep the press productive when fuser replacement is required.

Optional Performance Package

For the Versant® 180, an option is available called the "Performance Package." The Performance Package enhances the capabilities of the base Versant 180 Press with greater speed on heavier weight stocks and also provides tools for automated color management.

Greater speed on heavyweight stocks is referred to as "All Stocks Rated Speed (ASRS)." This feature improves productivity by extending the rated speed of the press for each stock size to every stock weight for that size, up to 350 gsm. Typically, heavier stocks slow down a press, because they absorb heat more slowly and less evenly than lighter weight media. The All Stocks Rated Speed feature eliminates the speed bottleneck created by heavier weight stocks. With ASRS, the speed of the press is governed by the size of the stock only, and not by its weight. This means that all stock weights up to 350 gsm for a given sheet size will run at the rated speed—the top speed—for that stock size. This chart shows the speed difference with the optional Performance Package:

Media Size	Print Speed	
Print Speeds (Simplex) Coated or Uncoated Paper	With Performance Package	Without Performance Package
Maximum Print Speed A4/8.5 x 11" (LEF)	80 ppm for stocks 52–350 gsm	• 80 ppm for stocks 52–220 gsm • 60 ppm for stocks 221–350 gsm
Maximum Print Speed A3/11 x 17" (SEF)	44 ppm for stocks 52–350 gsm	• 44 ppm for stocks 52–220 gsm • 32 ppm for stocks 221–350 gsm
Maximum Print Speed SRA3/12 x 18" (SEF)	37 ppm for stocks 52–350 gsm	• 37 ppm for stocks 52–220 gsm • 29 ppm for stocks 221–350 gsm
Maximum Print Speed 13 x 19.2" (SEF)	37 ppm for stocks 52–350 gsm	• 37 ppm for stocks 52–220 gsm • 29 ppm for stocks 221–350 gsm

The Performance Package must be ordered prior to installation. It is not possible to upgrade the Versant 180 with the Performance Package at a customer location after the system has been ordered and installed.

X-Rite® Inline Spectrophotometer for IQ and Color Management with the Performance Package

The optional Performance Package includes an Inline Spectrophotometer (ILS) built into the paper path and housed in the Interface Decurler Module (IDM). The ILS is a sophisticated X-Rite scanning device that measures spectral data and hands that data over to the color management software for the press. This software, called the Automated Color Quality Suite, ensures stable, accurate and repeatable color. It also eliminates the need for operators to use a hand-held spectrophotometer during print server calibrations. The ILS and the ACQS software also facilitate the creation of custom destination profiles for each stock that the press can print on. Once set up, the measurement process and calculations are all automatic for both calibration and profiling. The ILS uses the industry-standard XRGA (X-Rite Standard for Graphic Arts).

The X-Rite® Inline Spectrophotometer automates the collection of XRGA data for calibration and profiling.

Note that the ILS is superior to both hand-held spectrophotometers and densitometers. Hand-held spectrophotometers are labor-intensive while inline densitometers are less capable devices. Densitometers do not permit inline profiling or real calibration because they only measure ink density and not the light wavelengths that can be converted into independent color space. With the ILS, you benefit from the automatic measurements that hand-held spectrophotometers can't deliver, as well as the spectrum wavelength measurements that an inline densitometer can't generate.

The ILS reduces time-consuming manual color maintenance tasks and also eliminates operator errors. Additionally, operators are more likely to complete calibration and profiling regularly to maintain optimum IQ, because it is pain-free and easier.

IQ Management with IRA, SIQA and Custom Paper Settings

The Versant® 180's Integrated Registration Alignment (IRA) is a combination of proprietary technology that automatically gives you remarkable registration—making Versant registration easy, accurate and automated. IRA uses image processing called IreCT, which automatically—with high accuracy—adjusts the placement of images on the printed page. Using a dedicated integrated circuit, IRA calculates and computes the best output possible, taking advantage of advanced paper transport components on every sheet—automatically. When used in conjunction with Simple Image Quality Adjustments (SIQA), your press becomes more capable, allowing you to produce higher quality jobs faster and on more media types for better output.

SIQA is a set of maintenance tools that adjusts the quality of the printed images generated by the Versant 180 Press. SIQA performs three types of adjustments:

Image-to-Media Alignment Adjustment

SIQA uses 256 reference points to adjust alignment for Skew, Image Magnification, Registration and Perpendicularity. After SIQA is run, the image is properly registered. The alignment procedure generates an individual alignment Custom Paper Setting for the stock/tray combination selected when performing the procedure. These Custom Paper Settings are profiles that ensure that images are placed correctly on the media. You can create up to 50 profiles. Each created profile is linked to a tray and will then be automatically used each time the associated stock and tray are used, ensuring optimal print alignment.

Density Uniformity Adjustment

The Density Uniformity procedure adjusts print engine tables to ensure that ink is deposited uniformly and consistently across the entire surface of a page from the inboard side of the page to the outboard side of the page. This direction is across the page opposite from the direction of the paper flow through the press. Density Uniformity Adjustment is especially important when multiple images are printed on one sheet as done for business cards. Without this tool, cards on one side of the sheet may look different from cards on the other side of the sheet, because the density of the toner across the page may vary. With the Density Uniformity Adjustment, the xerographic system automatically adjusts the thickness of the toner so there is no unwanted variation. This ensures consistent color across the entire printed image.

Image Transfer Adjustment

Image Transfer corrects for uneven toner coverage and color shift—issues that can occur on heavyweight stocks or textured and other specialty stocks. This procedure creates and saves an Image Transfer Adjustment to the Bias Transfer Roll in the press. The Bias Transfer Roll is where the image is transferred from the belt to the paper. Once created for a stock, the adjustment is saved in a profile and can be selected for that stock for any tray.

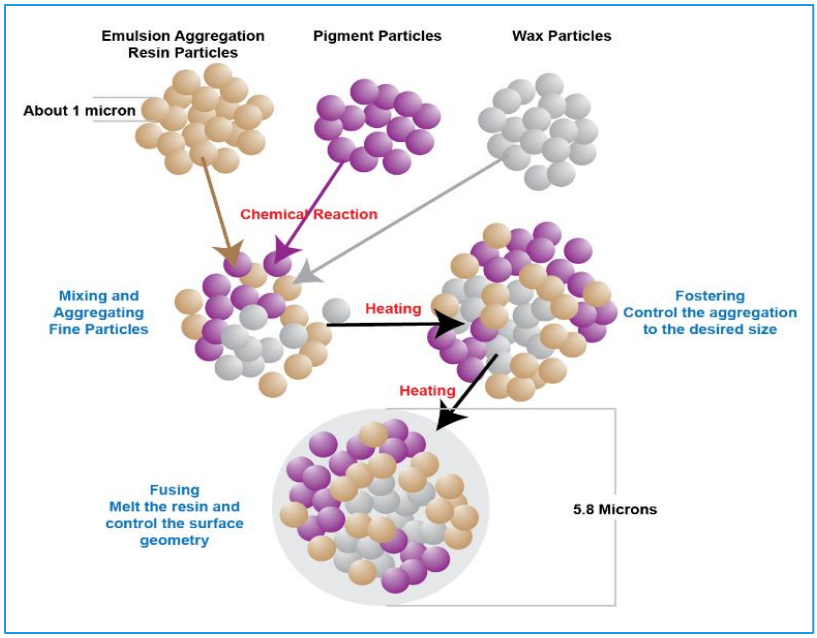
These three adjustments require printing and scanning targets, and then saving the data. SIQA automates the creation of the adjustment and eliminates the need for you to interpret printed targets and manually enter adjustment values. This saves a lot of time and also avoids errors. Without SIQA, the manual process consists of performing extensive visual inspections, manually resetting values, re-printing, re-inspecting and continuing with a repetitive and time-consuming trial-and-error process.

More Image Quality

Use of Emulsion Aggregation (EA) Toner

The conventional toner manufacturing process consists of starting with plastic and melt-mixing in pigment and special ingredients, followed by pulverizing the resulting block of composite plastic to a fine powder. After this, the powder still has to be processed to remove oversized chunks and ultra-fine particles. This multistep process results in non-uniform angular particles with a somewhat wide size and shape distribution.

By contrast, the Versant® 180 features low-melt Emulsion Aggregation (EA) Toner, or Dry Ink, which is a chemical toner prepared by an entirely different process called "emulsion aggregation." This is a chemical process that "grows" very small, uniform particle sizes from even smaller sub-micron particles. The EA process delivers optimal particle size and distribution for outstanding color image quality. The small size, and the relative uniformity of all the particles in a particular batch of toner, is more predictable than the conventional mechanical process of pulverizing extruded plastic for toner. The process is also less energy intensive.



EA Toner Manufacturing Process

EA toner produces outstanding quality with less dry ink and no fuser oil. The press uses these Dry Ink Cartridges: K or Black Dry Ink; C or Cyan Dry Ink; M or Magenta Dry Ink; and Y or Yellow Dry Ink. These cartridges are keyed so that an operator cannot mistakenly install a cartridge in the wrong housing.

Xerox® Ultra HD Resolution Technology with Advanced Digital Processing

The Versant® 180 delivers a print resolution of 2400 x 2400 dpi using a proprietary image processing and image transfer technology called **Ultra High Definition** or, simply, **Ultra HD**. **Ultra HD** is a precise combination of increased RIP resolution, a proprietary imaging path through the system and VCSEL ROS technology (the laser used in the xerographic printing process). Together, these technologies produce high levels of image quality for vector images, fine lines and text. Ultra HD delivers ultra-smooth gradients on the output, without visible stepping.

This illustrates how the extra color depth delivers thousands of addressable shades in a vector gradient to smooth out transitions.

Ultra HD at the Print Server

The print server renders images at 1200 x 1200 x 10 dpi. The EFI™ print servers available for the Versant Family feature the ability to resolve color to a depth of 10 bits per color. The10-bit color depth is a unique Xerox feature that means that files are rendered at 10 bits per pixel versus the industry standard of only 8 bits per pixel. This means that the print server can resolve up to 1,024 levels of color for each CMYK separation. This is a far greater resolution than in previous generation presses, which used a color depth of only 8 bits. EFI has branded this technology "Fiery Ultra Smooth Gradients" because of its ability to reduce stepping or banding in a gradient blend and deliver superb image smoothing.

In a special white paper on Versant's advances in imaging, InfoTrends, the leading market research and consulting firm for document solutions, writes:

"In the class of cut-sheet color electro-photographic products with Fiery front ends, no other system provider has a print engine capable of receiving 10-bit data. This sets the bar for all other systems whose print engines currently can only accept 8-bit data. This is a significant technological advance, and is an important differentiator for the Versant product family."

Ultra HD Resolution on the Xerox® Versant 2100 Press received the prestigious 2016 InterTech™ Technology Award. This award is granted by an independent panel of experts, sponsored by the Printing Industries of America, evaluating technology that will have the most significant impact to the future of print. This identical award-winning technology is included in the Xerox® Versant 3100 and Versant 180 Presses. The award stated:

"Ultra HD Resolution is new technology that is designed to generate and maintain the highest possible image quality throughout the entire imaging chain, from the print server, through data transfer to the print engine and the xerographic components of press itself. Ultra HD Resolution Technology is a precise combination of increased RIP resolution, a proprietary imaging path through the system, and VCSEL ROS technology (the laser used in the xerographic printing process). As a complementary set of core technologies, Ultra HD includes features that optimize RIP resolution, color depth, half toning, and print imaging density. Together, these technologies produce dramatic new levels of image quality for vector images, fine lines, text, and ultra-smooth gradients without visible stepping."

The judges' final analysis was "**Ultra HD Resolution lets companies print more color levels and produce jobs at…a quadruple increase in resolution from previous generation presses. The judges were amazed by the print quality, noting that with the resolution increase there's no longer a reason to avoid the elements that used to be a problem for digital print—gradients, thin fonts, and vector graphics.**"

Ultra HD at Imaging Transfer

Between the print server and the print engine, a Common Device Interface (CDI) cable with wide bandwidth completes the data transfer. This is a dual-cable, high-speed serial transmission connection to the print engine that supports the 10-bit color depth. The transfer process involves complicated computations and large amounts of bandwidth for the transfer. Large bandwidth is required because the size of the data stream is much larger due to the increased resolution and color depth. The Versant® Family video pathway transfers the bit stream in its entirety, without the need for "down-sampling" or reducing the data. Since down-sampling the image is not necessary, the full resolution that the print server is capable of producing is now presented to the print engine.

Ultra HD at the Print Engine

Halftoning is the process of laying down physical toner dots on the printed page. This is a sophisticated process that transforms the four toner inks (Cyan, Magenta, Yellow and Black) into the optical appearance of the full color gamut of which the press is capable. The press does not do this by physically mixing colors, as a painter might; it achieves a similar result by printing very small physical dots of the four primary colors in extremely close proximity to one another in varying combinations, sizes and geometries. These collections of tiny physical ink dots produce a logical "dot" that appears as a specific color and tonal density from a distance. These geometric dots are themselves so small that they cannot normally be detected by the naked eye without magnification.

The Versant photoreceptor plays a crucial role in the imaging process. Photoreceptors are multi-layer thin film devices that convert light into electrostatic images. The Versant photoreceptor receives light from an imaging device called the VCSEL ROS (Vertical-Cavity Surface-Emitting Laser Raster Output Scanner). The ROS uses thin beams of light that scan from one side of the photoreceptor to the other to lay down a series of dots. Eight sets of four beams (32 beams in total) are used in parallel for simultaneous scanning. One series of dots is called a line, and the ROS lays down line after line of dots on the photoreceptor to create an image. The resolution of the image is a function of the number of dots on a line, and the number of lines on a page. Using this technology, the Versant 180 delivers a print resolution of 2400 x 2400 dpi.

During this xerographic process, anywhere light touches the drum, a small spot of ink will result on the printed page. Anywhere light is prevented from touching the surface, no ink will be deposited. Halftone screening is the process of deciding where light should and should not be permitted through to the drum. Screening is needed for each toner color in the press.

The Versant 180 offers an expanded array of halftone screens or "dots" that differ in geometry, resolution and ink consumption. These halftone dots or "frequencies" are designed to yield either smoother, crisper resolution of objects or improved uniform tinted areas (smooth, less mottle or grain).

These halftone screens can be selected by the operator according to the needs of the print job:

Halftone Screen	Dot		
Clustered Dot Screens	150 175	200 300	600
Rotated Line Screens	150	200	
FM Screen	Stochastic		

You can select a higher halftone dot frequency to bring out the details and definition in the print images or use a lower halftone dot frequency to maximize the uniformity of tints across large color areas. A higher frequency might be used to bring out the detail in text and photos, whereas a lower frequency would be helpful to maintain a uniform appearance for an image with large sweeps of sky, ocean or just straight tint. In addition, the Versant® print servers enable operators to select halftones for different object types within the printed page.

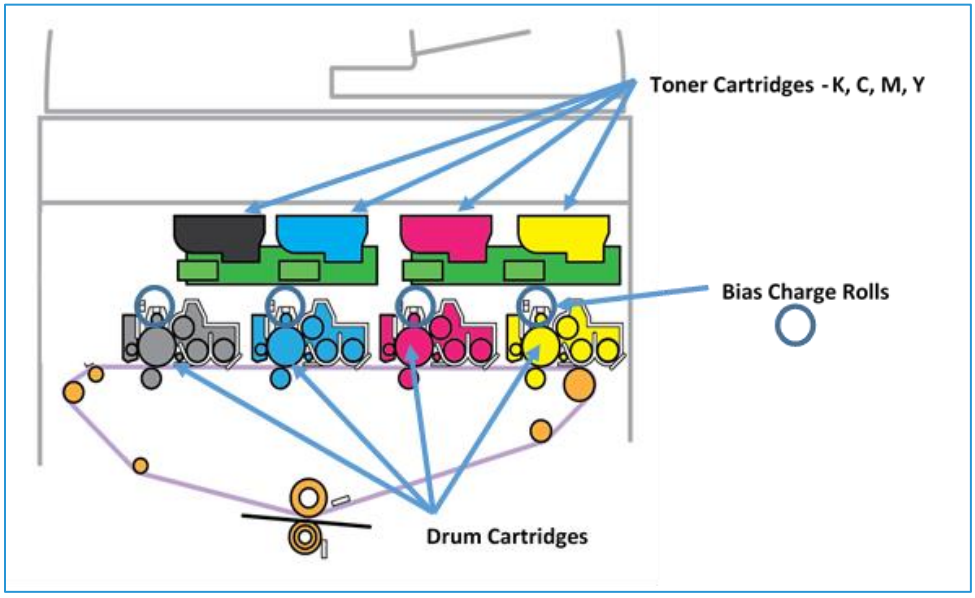
Closed Loop Process Controls Ensure Color Consistency Within Print Runs

In any high-end press, color consistency must be maintained from page to page to ensure that the pages printed at the beginning of a job will look identical to those printed at the end.

To accomplish this, the Versant 180 features an internal, automated process that images density patches on the Intermediate Belt Transport (IBT), as well as internal sensors that constantly monitor the system and make quality adjustments in real time. This continuous or "closed-loop" process maintains color consistency and color-to-color registration throughout each print run. Color patches and registration marks are placed on the image carrier between every impression. These patches are then continuously measured during a job and adjustments are made automatically by the press, as required. The result is higher color quality and consistency with no operator involvement.

Bias Charge Rolls and Auto Cleaning Technology

The Versant® 180 is designed with Bias Charge Rolls as key xerographic components. The Bias Charge Rolls are an essential element to Drum Cartridges in the press. The Drum Cartridge, another key xerographic component, consists of a Drum, a Bias Charge Roll and a Cleaning Assembly. The Bias Charge Rolls apply a uniform negative charge to the Drum, which is used to attract the toner to the surface of the drum. Because the charge is uniformly applied, the result is smoother halftones on the printed output. Another advantage to this xerographic assembly includes automatic cleaning built into the process and requiring no press down-time or operator intervention. The Drum Cartridges are designed as a single Customer Replaceable Unit (CRU) for both the Drum Cartridge and the Bias Charge Roll, and this makes maintenance easier and faster for these components.



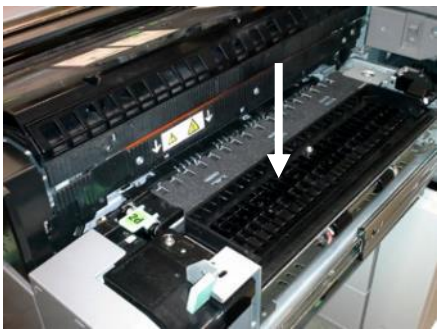
Bias Charge Rolls generate a uniform electrical charge across the Drum Cartridges, which produces smoother halftones than other technology.

Decurling Technology to Ensure Flat Output for Finishing

A Decurler is standard equipment on the Versant 180 and it is built right into the print engine. This is important because the fusing process induces curl in the prints. The amount and direction of the curl, upward or downward, depends on many factors such as media type, ambient humidity and run mode. The Versant press uses a Decurler that removes or reduces the curl to prevent curl-induced jams and ensure flat sheets for finishing.

The decurling process is computer-controlled using data such as the paper weight being used, as well as the temperature and humidity of the press environment.

The Decurler is located in the Transfer Drawer, immediately after the Fuser. You can easily create Custom Paper Setting profiles that automatically change Decurler settings for specific stocks. There are additional Decurling Units in the Interface Decurling Module and the Production Ready Finisher that also ensure perfectly flat finished output.



Print Engine Decurler

More Versatility

Small Footprint

The footprint of the Versant® 180 is compact and therefore versatile for press placement in smaller spaces. The exact dimensions will depend on your specific configuration. Your Xerox support team will help you decide which optional modules you need and the overall size of the planned configuration.

Xerox® Versant® 180 Front and Top View

Extra Long Sheet (XLS) Printing

On the Versant 180, you can print on long sheets up to 26" (660 mm) using the standard XLS feature. This lets you create banners, advertisements, A4 landscape book covers, calendars and long sheet prints.

XLS specifications include:

- Print Speed: Up to 9 ppm, Simplex Mode only
- Paper Weights: Uncoated 52–220 gsm; Coated 72–220 gsm
- Maximum Paper Size: 13 x 26" (330 x 660 mm)
- Maximum Printable Area: 12.7 x 25.7" (323 x 654 mm)

To use this feature, sheets must be fed from the Multi-Sheet Inserter (MSI) Tray 5 and sent to an output destination of the Offset Catch Tray or Top Tray of the HCF or Finisher. When performing XLS printing, the GBC® AdvancedPunch™ Pro cannot be configured with the system.

Business Workflows with Copying and Scanning Features

The Versant® 180 has additional flexibility for office workflow with a high-quality single-pass copier/scanner as standard equipment. A dual-head color scanner, which simultaneously scans both sides of each page, provides a copy and scan duplex speed of 200 ppm for black and white as well as color at 400 dpi resolution. At 600 dpi, the speed is 150 ppm for color and 200 ppm for black and white. This speed, combined with the large capacity 250-sheet Duplexing Automatic Document Feeder (DADF), delivers excellent copying and scanning productivity. The document handler holds original sizes from 5.5 x 8.5" (A5) to 11 x 17" (A3).

In addition to copying, the scanning output options include scan to a local folder, scan to a USB drive (optional), scan to email, scan to the network and scan to a computer. You can also set the scan feature to scan to a cloud storage location such as Google Drive™, Dropbox™ or Adobe® Creative Cloud®.

The Xerox Extensible Interface Platform® version 1.5 is another office option unique to the Versant 180. This is a technology built into the press that enables third-party developed applications to run right from the Control Panel.

Print Server Options

The print server prepares files for printing after they are submitted from users. It does this by converting the print file into digital images—a process known as rasterizing the data. In addition, the server enables queue management, job management and color management for the press. The Versant 180 offers three different print server options:

The Xerox® FreeFlow® Print Server is a powerful standalone unit that delivers benchmark RIP performance using data caching and distributed processing. The server provides full production capabilities, outstanding color management and the flexibility to make late stage edits, like imposition and color corrections.

The Xerox® EX 180 Print Server Powered by Fiery® is a standalone print server that offers the convenience of a dedicated unit adjacent to the press itself. The EX 180 is an excellent choice for graphic arts and in-plant customers. It is based on the EFI™ Fiery® FS200 Pro software platform, and sets a new standard for color accuracy and image quality by using a new 10-bit, 1200 dpi technology. This print server is the more powerful of the two EFI options, and enables the full capabilities and features of the press.

The Xerox® EX-i 180 Print Server Powered by Fiery is an integrated print server that is designed for light production environments where physical space is at a premium or where the additional speed and flexibility offered by the EX 180 print server are not required. The EX-i 180 Print Server is physically attached to the back of the press, out of sight, to achieve a smaller footprint. This value-based option is well suited for light production or enterprise environments. With this EX-i 180 option, instead of accessing the device and job management through a system server, operators can use either the Control Panel on the press or a PC on the network running EFI Command WorkStation® (CWS).

Although generally less sophisticated than the other options, the EX-i 180 Print Server does support Ultra HD Resolution Technology with 10-bit color rendering. The major difference between the two EFI print servers is that the EX-i 180 Print Server does not support the Versant 180 Performance Package, complex variable data workflow, Adobe PDF Print Engine® (APPE), Job Definition Format (JDF), Fiery Compose or the EFI Graphic Arts Package, Premium Edition—whereas the EX 180 Print Server does support all these features. You will be able to offer personalized printing with Fiery FreeForm™, a built-in, free variable data printing format.

Feeding and Finishing Modules

The versatile finishing options for the Versant® 180 make all the difference in your ability to deliver a wide range of applications to meet customer needs and expand your services.

Feeding Options

Build the press you need to grow your business with a range of media feeding options.

1 **Three Internal Trays** hold 550 sheets each and feed 52–256 gsm coated and uncoated sizes 5.5 x 7.2" (140 x 182 mm) up to 13 x 19.2" (330 x 488 mm).

2 **Bypass Tray** holds 250 sheets of standard sized media, 3.9 x 5.7" (98 x 146 mm) up to 13 x 19.2" (330 x 488 mm), designed for convenience by adding an accessible media pick point for feeding standard and specialty media; auto-duplexing up to 300 gsm. Feeding of extra-long sheets (XLS) for banner printing of 13 x 26" (330 x 660 mm) sheets printed simplex, uncoated and coated up to 220 gsm.

3 **Optional Two-Tray Advanced Oversized High Capacity Feeder (Adv OHCF)** features a total paper capacity of 4,000 sheets (13 x 19.2") in two trays (2,000 sheets each tray), with a minimum paper size of 3.9 x 5.8" (98 x 148 mm) and a maximum paper size of 13 x 19.2" (330 x 488 mm). The recommended weight range is 52–350 gsm.

- Paper stabilizer minimizes skew, and four blowers help feeding and improve reliability
- Nip/Release Roller System improves paper handling and prevents misfeeds
- Recommended for running large quantities of paper
- Minimum size extended to 3.9 x 5.8" (98 x 148 mm) with Tray Inserter for postcards and envelopes

Optional Dual Advanced High Capacity Feeders: A second Advanced High Capacity Feeder (AHCF) can optionally be added to the system to extend the feeding capacities by providing two additional trays. This second, chained feeder is referred to as Trays 8 and 9, and it feeds a variety of stock sizes, including standard sizes and oversized stock up to 13 x 19.2" (330 x 488 mm). Each tray holds 2,000 sheets (at 90 gsm) with a weight range of 52–350 gsm.

Optional One Tray Oversized High Capacity Feeder (OHCF) (not shown): This unit features a total paper capacity of 2,000 sheets of 13 x 19.2" (330 x 488 mm) paper in one tray, with a minimum paper size of 3.9 x 5.8" (100 x 148 mm) with Tray Inserter, and a maximum paper size of 13 x 19.2" (330 x 488 mm).

- Recommended weight range: 52–300 gsm, but rated to run up to 350 gsm
- Paper stabilizer minimizes skew, and four blowers help feeding and improve reliability
- Roller system helps prevent misfeeds
- Optional Envelope Support Kit enables feeding more envelopes from the Oversized High Capacity Feeder

Optional High Capacity Feeder (HCF) (not shown) holds 2,000 sheets of 8.5 x 11" (A4) paper with a recommended weight range of 64–220 gsm on uncoated paper only. It is ideal for long print runs for reports, presentations and mailers on letter-size sheets.

Production Ready Finishing Options

Versatile finishing options allow you to create exactly the press you need to build your business. There's no need to choose between capacity and capability. With Versant®, you can have it all—inline and hands-free.

Robust finishing options include our versatile new Production Ready Finisher, handling more pages, larger sizes and heavier weights. Mix and match options include the Xerox® Inserter, Xerox® Basic Punch and our new Xerox® Two-Sided Trimmer with a buffering component to keep your Versant press printing fast. Add the Xerox® SquareFold® Trimmer to automatically create full bleed, perfect-bound-like booklets inline.

Maximum and Minimum Full Bleed Booklet Sizes are possible with the new Xerox® Production Ready Finisher Booklet Maker, Xerox® Two-Sided Trimmer and Xerox® SquareFold® Trimmer options.

Largest Full Bleed Booklet Size

- Biggest paper size for PR Finisher is the same as the press: 13 x 19.2" (330 x 488 mm)
- Two-Sided Trimmer smallest cut is 0.236" (6 mm) from both head and foot
- SquareFold Trimmer smallest face cut is 0.0787" (2 mm)
- Largest finished or maximum size full bleed booklet is 9.5 x 12.5" (242 x 318 mm)

Smallest Full Bleed Booklet Size

- Smallest paper size for PR Finisher to trim: 7.7 x 10.1" (194 x 257 mm)
- Two-Sided Trimmer smallest cut is 0.236" (6 mm) from both head and foot
- SquareFold® Trimmer largest face cut is 0.787" (20 mm)
- Smallest finished or minimum size full bleed booklet is 4.27 x 7.17" (108.5 x 182 mm)

This shows the Production Ready finishing chain of options for the Versant® 180. Additional options include Xerox Partner DFA finishing options, the Plockmatic Pro 50/35 Booklet Maker and the GBC® eWire™, or for lighter production options, the Business Ready Finishers.

1—Xerox® Interface Decurler Module (IDM)	
Function	• Connects the print engine with inline finishers • Enables communication between the print engine and finishers • Adjusts the exit height of the paper and cools the paper • Decurls paper to ensure flat sheets for finishing
Additional Details	• Different version of this unit is used with the Performance Package on the Versant 180 • ILS included for the Versant 180 Performance Package; adds additional cooling and an X-Rite® Inline Spectrophotometer

2—Xerox® Inserter	
Function	• Inserts preprinted/blank media into printed documents • Innovative design places it up front to enable other finishing on inserted sheets such as trimming, stacking, punching, folding and stapling
Paper Stack	250 sheets
Paper Size	• Smallest: 7.2 x 5.8" (182 x 148 mm) • Largest: 13 x 19.2" (330 x 488 mm)
Paper Weight	• Uncoated: 52–350 gsm • Coated: 72–350 gsm

Not Shown—GBC® AdvancedPunch™ Pro	
Function	• Provides inline punching for all main binding styles with exchangeable modular dies • 12 die set types accommodate commonly used binding styles such as Comb, Coil, Wire, Ring, ProClick® and VeloBind®
Paper Size	Handles 10 fixed sheet sizes (A5–A3)
Paper Weight	• Uncoated: 75–300 gsm • Coated: 120–300 gsm
Additional Details	Convenient control panel shows die type and cycle count, Power On/Off, Chip Tray Full, Chip Tray Position, Punch Die Position, Front Door Alert, Paper Jam and access to adjustments. Extra-Long Sheet (XLS) printing not supported on Versant® 180 with GBC AdvancedPunch Pro option.

3—Xerox® High Capacity Stacker (HCS)	
Function	• Offsets output to large capacity stacking tray with a movable cart, or sends proof print or sheets in the top tray • Ideal for long production runs
Paper Stack	• Up to 5,000 sheets in main tray of 80 gsm, 8.5 x 11" (A4) paper • Up to 500 sheets in top tray
Paper Size	• Smallest 8 x 7.2" (203 x 182 mm) • Largest 13 x 19.2" (330 x 488 mm)
Paper Weight	64–350 gsm
Additional Details	Chained units are **not** available on the Versant 180. (Available on the Versant 3100)

4—Xerox® Two-Sided Trimmer	
Function	• Trims 0.985–0.236" (6–25 mm) off head (top) and foot (bottom) of sheets • Provides full bleed for booklets when face-trimmed with the Xerox® SquareFold® Trimmer
Paper Size for Two-Sided Sheet Trim	• Minimum: 7.7 x 8.3" (194 x 210 mm) • Maximum: 13 x 19.2" (330 x 488 mm)
Paper Size for Two-Sided Booklet Trim	• Minimum: 7.7 x 10.1" (194 x 257 mm) • Maximum: 13 x 19.2" (330 x 488 mm)
Paper Weight	• Uncoated: 52–350 gsm • Coated: 106–350 gsm
Additional Details	• Used in creating booklets up to 30 sheets/120 pages • Configured with the Xerox® SquareFold Trimmer for full bleed trimming • Contains a buffer module that maximizes print engine productivity

5—Xerox® C/Z Folder Module (option for Production Ready Finishers)	
Function	• Produces sheets with a C-Fold or Z-Fold on letter stock (8.5 x 11" or A4) • Creates an Engineering Z-Fold on 11 x 17" or A3/B4 paper
Paper Size	• C and Z-Folds: 8.5 x 11" (A4) • Engineering Z-Fold: 11 x 17" (A3/B4)
Paper Weight	Uncoated: 64–90 gsm
Additional Details	An Engineering Z-Fold, also called a "Half Z-Fold", places a fold on 11 x 17" or A3/B4 paper and reduces the sheet to 8.5 x 11" or A4 size.

6—Xerox® Production Ready Finisher	
Function	• Produces stapled sets with a variable-length stapler • Provides single or dual stapling options • 100-sheet staple capacity
Stapling Paper Size	• Minimum: 7.2 x 5.7" (182 x 146 mm) • Maximum: 11.7 x 17" (297 x 432 mm)
Stacking Paper Size	• Minimum: 5.83 x 5.75" (148 x 146 mm) • Maximum: 13 x 19.2" (330 x 488 mm)
Paper Weight	• Uncoated: 52–350 gsm • Coated: 72–350 gsm
Additional Details	• Contains a built-in bi-directional decurler to ensure flat output • Stacks 3,000 sheets plus 500-sheet top catch tray

Not Shown—Xerox® Production Ready Finisher Booklet Maker	
Function	Delivers the same feature set as the Production Ready Finisher and also creates stapled booklets up to 30 sheets (120 imposed pages at 90 gsm)
Paper Size	• Minimum: 7.7 x 10.1" (194 x 257 mm) • Maximum: 13 x 19.2" (330 x 488 mm)
Finished Booklet Sizes	• Minimum/Smallest full bleed: 4.27 x 7.2" (108.5 x 182 mm) • Maximum/Largest full bleed: 9.5 x 12.5" (242 x 318 mm)
Paper Weight	• Uncoated: 60–350 gsm • Coated: 106–350 gsm
Additional Details	Stacks 2,000 sheets to the stack tray plus 500-sheet top catch tray

Not Shown—Xerox® Production Ready Finisher Plus	
Function	• Provides the same functions as the Xerox® Production Ready Finisher • Adds Transport Module that enables connection to third-party finishing • Available finishing options include Plockmatic Pro 50/35 Booklet Maker and GBC® eWire™
Stapling Paper Size	• Minimum: 7.2 x 5.7" (182 x 146 mm) • Maximum: 11.7 x 17" (297 x 432 mm)
Stacking Paper Size	• Minimum: 5.83 x 5.75" (148 x 146 mm) • Maximum: 13 x 19.2" (330 x 488 mm)
Paper Weight	• Uncoated: 52–350 gsm • Coated: 72–350 gsm
Additional Details	Stacks 2,000 sheets to the stack tray plus 500-sheet top catch tray

Not Visible—Xerox® Basic Punch (option for Production Ready Finishers)	
Function	Provides hole punching for 2/3 hole, 2/4 hole and Swedish style 4-hole punch
Paper Size	• 2 hole: 11.69 x 17" (297 x 431.8 mm) • 3 hole: 10 x 7.2" (254 x 182 mm) • 4 hole: 10.5 x 7.2" (267 x 182 mm) • Minimum sheet size: 8 x 7.2" (203 x 182 mm)
Paper Weight	Coated and Uncoated stocks up to 220 gsm

7—Xerox® SquareFold® Trimmer (option for Production Ready Booklet Maker Finisher)	
Function	• Receives booklets from the booklet maker, flattens the booklet spine making a flat finished booklet with the appearance of bound book-like edge; eliminates shingle effect with a professional face trim, up to 120 pages (30 sheets). • Trims 0.079–0.799" (2–20 mm) from face edge of the booklet • Used with the Xerox® Two-Sided Trimmer for finished full bleed booklets with the Production Ready Booklet Maker Finisher
Paper Types	Coated and Uncoated stocks up to 350 gsm

Not Shown—Plockmatic Pro 50/35 Booklet Maker	
Function	Produces booklets up to 35 or 50 sheets (depending on model)
Additional Details	• Options include Rotate Crease and Bleed Trimmer (RCT), Cover Feeder (CF50/35), Face Trimmer (TR50/35) and Square Folder (SQF50/35) • Requires Xerox® Production Ready Finisher Plus interface to third-party finishers
Paper Size	• With RCT: 8.1 x 10.8" (206 x 275 mm) up to 13 x 18" (330 x 457.2 mm) • Without RCT: 8.1 x 10.8" (206 x 275 mm) up to 12.6 x 18" (320 x 457.2 mm)
Paper Weight	• Uncoated: 64–300 gsm • Coated: 105–300 gsm
Booklet Size	8.1 x 5.4" (206 x 137.5 mm) up to 12.6 x 9" (320 x 228.6 mm)

Not Shown—GBC® eWire™	
Function	Automated inline binding system using traditional twin-loop wire binding, eliminating the need for manual binding of books and calendars in letter and A4.
Paper Size	8.5 x 11", 5.5 x 8.5", A4 (297 x 210 mm)
Paper Weight	75–300 gsm
Additional Details	Requires GBC AdvancedPunch™ Pro and the Xerox® Production Ready Finisher Plus

Finishing for Lighter Production Environments: The Business Ready Finishers

Two additional finishers for the Versant® 180 and a lighter production environment are the Business Ready (BR) Finishers. These value-based options are better suited for lower production requirements.

Finisher	Description
Business Ready (BR) Finisher	Lighter-duty option for finishing and stacking. Staple up to 50 sheet uncoated/15 sheet coated. Includes hole punch and two output trays: 500-sheet top tray and up to 3,000 sheets using standard size sheets or custom sizes (maximum 13 x19.2" /330 x 488 mm to minimum 8 x 7.2"/203x182 mm) up to 350 gsm uncoated and coated.
Business Ready Finisher with Booklet Maker	Booklet making with Business Ready Finisher features; 500-sheet top tray, 1,500-sheet stack tray, adding third tray to output; saddle-stitch booklets up to 64 pages (16 sheets/90 gsm uncoated–7 sheets/to 176 gsm coated). Booklets on uncoated and coated stocks to 300 gsm, maximum sheet 13 x 18"/330 x 457.2 mm, half-fold up to 5 sheets on 220 gsm.

Versant®180 Press for Benchmark Quality and Advancing Your Capabilities

The Versant Family of Presses is known for high quality and easy automation, and the ability to print on a wide range of media types. With the Versant 180, you'll instantly advance your capabilities. You'll gain a quality advantage and the ability to create high-value applications. Attract new business, increase margins and earn a reputation for excellence with stunning, accurate output. Reduce waste and maximize uptime with Simple Image Quality Adjustment (SIQA) for perfect front-to-back registration at the touch of a button. Choose from a full range of fully automated inline finishing options, including full bleed booklets. Print at top speeds on stock weights from 52–350 gsm, and maximize your job types with the ability to run envelopes, 26" (660 mm) banners, polyester/synthetic, textured, colored, custom media and mixed-stock printing. The Versant 180 achieves a new standard of image quality, delivering four times more pixels than other presses while still printing at blazing fast speeds. It's a winning combination of technologies, including EA Toner, 2400 x 2400 dpi with 10-bit RIP and an advanced Compact Belt Fuser that provides just the right amount of consistent heat and pressure for a given stock. Every job is rendered with jaw-dropping detail, crispness and clarity from first print to last.

Expand Your Operation and Print 25% Faster on Even the Heaviest Stocks When You Add the Performance Package

The Versant 180 with Performance Package delivers full automatic color calibration and in-machine processes that take the guesswork out of producing perfect output every time. Build your business—and keep up with demand as it grows over time—with the easy investment that provides even more power and performance. More advanced automation, faster speeds and built-in productivity-enhancers boost efficiency and bottom-line results as your business grows. A powerful combination of process controls and our Automated Color Quality Suite (ACQS) with an X-Rite® Inline Spectrophotometer provides fully automated color management and the highest possible print quality. Complex, multi-step calibration operations are reduced to pushbutton simplicity.

More Automation Adds Up To Better Results

With Versant, automation enhances key production processes—providing performance, image quality and versatility. With an Average Monthly Printing Volume (AMPV) of up to 80,000 and a maximum monthly duty cycle of 750,000, you can keep up with demand and grow your business, month after month. That means better results for your growing print operation, with across-the-board improvements to workflows, output and your bottom line. It all adds up to better margins, higher profits and the ability to grow strategically with a single, future-proof investment.

Find out more and explore options at www.xerox.com/versant180.