High-definition inkjet on offset stocks
QUALITY THAT OPENS NEW DOORS

Capitalizing on innovations in quality, speed and accuracy of inkjet printing, we are continually evolving the Truepress Jet520 series. Each new development advances our pursuit of quality and capability and expands the boundaries of conventional inkjet concepts, taking inkjet printing to levels never previously seen.
DIVERSITY

Wide-gamut inks for direct printing on offset coated paper

SCREEN’s SC Inks are proprietary water-based inks designed to print directly onto offset coated paper. Their unique permeability and adhesion technologies eliminate the need for an anchor coat while helping to preserve the texture of papers and reduce operating costs. SC inks offer both high density and high-speed drying, enabling the formation of sharp, well defined dots with no bleeding. They allow the Truepress Jet520HD to create rich, vibrant color tones that are compatible to offset printing.

Powerful drying functions

Inkjet inks have a high moisture content compared to offset inks, which means the drying system has a large impact on print quality and productivity. The Truepress Jet520HD features a highly stable and efficient drying mechanism, and when this technology is combined with the high-density, quick drying characteristics of SC inks, the result is outstanding quality and rapid output. An additional dryer (option) can also be installed to boost performance when using coated papers. This unit further improves both print speed and quality.
Breathtaking

Smooth and delicate textures that fascinates readers

The Truepress Jet520HD takes inkjet to a completely different level, vividly reproducing images, textures, details and solid areas of color in a way not previously seen from high-speed inkjet printing.

Cutting-edge printhead technology

The Truepress Jet520HD is equipped with inkjet printheads that deliver an industry-leading minimum droplet size of two picoliters as well as advanced proprietary screening technologies. Its 1,200 dpi resolution also enables the creation of extremely realistic looking textures. Unique inks produce smooth and vibrant gradations, providing quality levels comparable to offset printing. This quality is matched by extremely high precision. Printhead control technologies and unique inks that eliminate bleeding enable the reproduction of the most minute details. Even fine characters and lines can be printed with outstanding accuracy.
Truepress SC inks

Inspiring

Vivid colors that excite the senses

SCREEN’s proprietary inks enable unprecedented quality levels for an inkjet press.

Wide-gamut inks

Unique Truepress SC inks feature vivid CMYK primary colors and fast drying characteristics that eliminate bleeding and support the reproduction of a wide color gamut. These high value added inks are the fruit of SCREEN dedication over many years in developing inkjet presses and their expertise in ink characteristics, screening and color management, unique head control systems and more. With a tremendous color gamut, SC inks with the Truepress Jet520HD maximize the exceptional quality and open up a wide range of new possibilities for inkjet printing. Take advantage of this winning combination to help grow your business.
The Truepress Jet520HD incorporates a range of leading technologies in its printhead, ink and transport systems, all designed to maximize its capabilities and produce quality levels comparable to offset printing. This outstanding performance redefines the existing concept of variable printing systems and opens up new business opportunities in the printing market.

### Print Quality

- **Maximum resolution of 1,200 dpi**
  - The adoption of newly developed grayscale heads allows multi-droplet printing at a resolution of 1,200 dpi. This enables extremely high-quality output of the gradations for midtones, supporting smooth color reproduction with minimal graininess.

- **Precise 0.1 pt lines and microtext**
  - Conventional input presses are known for their issues with printing microtext and fine lines. The Truepress Jet520HD has a high-resolution 1,200 dpi printhead with a maximum droplet size of two picoliters plus proprietary Truepress SC inks, enabling it to deliver extremely precise reproduction even in this range. The result is a sharp, eye-catching finish with no blurring or jaggies.

- **Quality control using built-in scanner**
  - Density differences between printheads are often cited as a problem when using presses with multiple heads. The Truepress Jet520HD is equipped with built-in quality control scanners that perform regular checks and automatically adjust uniformity. After correction, the information is registered as an individual paper profile. The workflow can also be expanded to include JetInspection (option), a specialized unit capable of inspecting the entire surface of all media in real time. Using JetInspection dramatically reduces the time required for the creation of correction data.

- **Easy touch panel operation**
  - The entire sequence of operations from job registration to printing can all be entered and checked from the touch panel. This includes advance registration of paper information and fine adjustments to settings. Touch panel control helps to maximize both on-site work efficiency and uptime.

- **Compatibility with various paper types**
  - The Truepress Jet520HD comes preinstalled with heated rollers and air heating units, creating a powerful drying system that is optimal for its cutting-edge SC inks. Optional drying unit can be added to further improve throughput and quality. The press also incorporates a four-axis mechanism that enables stable transfer of a wide variety of paper types. Together, these features provide rapid, high-quality printing on standard inkjet papers as well as recycd and special papers with a variety of characteristics. The Truepress Jet520HD also supports paper thicknesses from 40 to 250 gsm, significantly expanding the range of potential applications.

### Ink and Head control

- **High-performance specialized inks**
  - SCREEN has developed the SC inks with various properties including water, rub, heat, light and chemical resistance. With a wide color gamut virtually the same as offset inks, SCREEN’s proprietary inks enable unprecedented quality levels for an inkjet press.

- **Two additional printheads**
  - Two additional printhead arrays can be added as options (planned), allowing the Truepress Jet520HD to accommodate specialized inks such as spot colors, in addition to CMYK (up to six colors). The wider expressive capabilities provided by these inks greatly expand the range of printing services that can be offered to clients.

- **Smart printhead control**
  - The Truepress Jet520HD is equipped with a unique printhead control that recognizes the color included in print data and activates only the required heads. The printheads that are not in use keep the cartridge caps closed, increasing the efficiency of both ink and energy usage.

### Various Capabilities

- **Dynamic Nozzle Shift (DNS)**
  - The Truepress Jet520HD is equipped with the Dynamic Nozzle Shift mechanism. This unit includes a transport system that is designed to reduce meandering to an absolute minimum. Sensors installed as part of the mechanism also perform real-time detection of the minute natural oscillations that occur during the high-speed transport of paper. The printing position is then automatically adjusted to the optimal location for the printing data. This mechanism reduces the effects of meandering and skewing much more effectively than in previous systems and ensures stable, consistent print quality.

- **Paper feeding assist mechanism**
  - The leading edge of the paper is fed by the paper feeding assist bar, it can be quickly and reliably sent through to the discharge section simply by turning a handle. The stability of this process eliminates paper feeding errors and greatly reduces the labor involved in preparing for printing.

- **Easy maintenance**
  - The Truepress Jet520HD uses a pull-out type printhead module, allowing daily maintenance to be performed with minimum effort. In the unlikely event a problem does occur, support staff can handle the situation more quickly, helping to maintain high operating ratios.

- **Safe and reliable ink replacement**
  - The ergonomically designed ink supply system uses 10-litre ink cartridges that can easily be handled by any operator. These cartridges also feature a different cap shape for each color to prevent incorrect insertion. The cartridges also automatically tilt as the remaining volume of ink decreases.
Advanced Workflow

EQUIOS is a universal workflow system that draws on SCREEN’s extensive prepress and printing knowledge to maximize the performance of our cutting-edge inkjet technology. EQUIOS offers high-speed processing using Adobe’s PDF Print Engine 4 and Mercury RIP Architecture, a newly developed color management system that links to paper information and user-friendly imposition functions that integrate SCREEN’s full prepress knowhow. These features have been developed based on SCREEN’s rich experience and encompass the full range of our professional knowledge. Together they help to provide a work environment that is easy to use regardless of the operator’s own skill level.

Perfect Inspection

As print quality has continued to increase, calls for improved detection capabilities have also grown. The Truepress Jet520HD can be loaded with the JetInspection software that is capable of performing highly comprehensive real-time inspection of high-quality variable images across all pages, in addition to providing conventional processing of OCR fonts and decoding of barcodes. JetInspection helps the Truepress Jet520HD to achieve its maximum possible performance. The software is also the foundation of the systems consistent accuracy and reliability.

- **Advanced Workflow**
  - **Ultra-fast processing of high-volume data**
    - For web press printing, the computation speed of output data is an important factor that affects the operating ratio of the printing system in various ways. EQUIOS helps to minimize the load placed on RIP processing by catching the shared sections of variable data (movable objects).
    - It also supports the fly RIP'ing by allowing RIP processing to be performed as the required data is being transferred. The parallel processing effectively maximizes press operating ratios.
  - **Proprietary screening technologies**
    - The Truepress Jet520HD utilizes SCREEN’s proprietary screening technology, enabling optimal display of gradations in images from highlights and shadows through to midtones. This system also minimizes moiré and broken lines to produce high-definition output.
  - **Automatic selection of optimum color profile**
    - The EQUIOS Color Management System first converts all the elements in a job to the targeted color space, such as GRACOL, CIE and SWOP. It then automatically selects the appropriate ICC profile according to paper types and output devices. Thanks to the EQUIOS Color Management System, specialist skills are not required to achieve professional results.
  - **Spot color**
    - Matching spot colors with process color inks is a challenge when considering full digital production. The EQUIOS Spot Color Editor helps reproduce the closest possible match by evaluating individual spot colors and approximating the closest CMYK reproduction values. The Editor then automatically generates a patch chart of the full range of possible process color matches for the target spot color. The operator then selects the process color patch that is the closest visual match and the selected separation is registered within EQUIOS to better match the spot color for subsequent jobs.

- **Perfect Inspection**
  - **Original built-in design**
    - The Truepress Jet520HD can be loaded with optional JetInspection, its own specially designed, dedicated inspection system. JetInspection can be controlled directly from the operation panel of the Truepress Jet520HD.
    - Even during printing, the operator is alerted by a warning light if any defects are detected and images of the defects and their positions can be checked in real-time via the operation panel and network. Inspection log including defect data and OCR and barcode decoding results can also be compiled and saved to EQUIOS.
  - **Linking with postprocessing**
    - Error information and its record ID can be transferred to postprocess systems as CSV files. SCREEN collaborates with industry leading postprocessors and other POD printer vendors and can offer total workflow solution from real-time error inspection, to diverting in postpress process, and to reprinting using both toner-based cut-sheet printers and our Truepress inkjet press.
  - **Dual simplex inspection**
    - In a dual simplex configuration, the two printers usually used for the front and back sides can both be operated independently as front-side printers. Operators can also register printing data and the base color of the paper in advance. This helps prevent false positions and improves the accuracy of defect detection.
  - **Greater efficiency during daily maintenance**
    - Using JetInspection greatly speeds up the creation of printhead correction data normally performed with the printhead scanner of the Truepress Jet520HD. This in turn cuts the time required for quality management, helping to improve operating ratios.
    - JetInspection is also now available as an option. The built-in camera system is equipped with the quality management functions to create the printhead correction data.
    - Supported printhead correction items:
      - Shading correction (color matching between printheads)
      - Checks for nozzle clogging of printheads
      - Alignment correction (print position accuracy)
Rapid automatic creation of consistently high-quality direct mail with real-time inspection of all pages

Varystudio variable data printing design software
Varystudio is proprietary software we have developed for the editing of variable print data (Adobe Creative Cloud plug-in). It enables on-screen layout design, selection of a wide variety of imposition patterns, insertion of postprocessing barcodes, and high-speed output of variable PDFs using hot folders. Varystudio can be easily configured to suit any client’s production environment. It also adapts seamlessly to any security measures and output volumes, helping to create an ideal workflow.

PDFformstudio solution software for variable PDF
The use of PDFs for data submission is also increasing in variable printing thanks to their reliability and high-quality in PDF format. PDFformstudio, developed by EQUIOS, offers the standardization of job setup, data and output management, and end-to-end workflow software.

PDFimposition, completion
PDFimposition, completion

Record management functions (EQUIOS option)
The PDF/VT international standard for variable printing offers the advantage of being able to embed variable data such as IDs, numbers, and recipient names directly into PDF. EQUIOS is able to read this data and perform page management using individual records. This enables the insertion of variable barcode fictitious for record management and the exclusion of data and printing from postprocessing devices using the information. The result is a highly streamlined automated workflow that boosts productivity.

End-to-end workflow solution
SCREEN has been working with industry leading postprocessors and other PDF printer vendors to ensure secure and automated end-to-end workflow. EQUIOS offers many functions to bridge gaps between processes, such as automated job creation and input, centralized output instructions, etc. It also enables the conversion of sequential workflow from the creation of variable barcodes for record management, to defect detection in inspection systems, to removal of error records on postprocessing devices and finally issuing the output commands for reprinting on production printers. Only EQUIOS offers such an incredible comprehensive workflow solution.

PDFformstudio solution software for variable PDF
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Automatic optimized imposition of mixed and small lot book runs with different page sizes and counts

Automation with open interface
Books are available in many different sizes and there are also size variations in page counts, making it difficult to create job setups. EQUIOS is equipped with open interface functions that enable it to link freely with optimum systems such as MIS and Web2Print. Order data received in CSV or XIF format can be reformatted on the basis it will be automatically processed by EQUIOS. This allows the automatic grouping and transfer of jobs that are able to output conditions such as paper type, sizes and fold types.

Support for diverse postprocessing methods
Barcodes for section sew binding
EQUIOS supports roll-to-book imposition that is suitable for Maccancettorechiesi Universe Swinging Web Fed, the innovative roll-to-book solution for sewing books directly from the roll. It also includes dynamic barcode output capability required to identify signatures and book blocks for sewing.

Cutting-edge roll-fed book imposition (option)
When even books of different sizes on a single roll, it is normal to perform printing using the same book block (sheet fold pattern) and then to finish the books to their correct dimensions in a final three side trimming. With conventional imposition layouts, this requires manual adjustments that precisely account for the fold and slit positions. EQUIOS automates the dedicated imposition processing necessary for roll-fed output of these books and also provides a convenient option that allows their output settings to be created in a single, error-free operation.

Variable cutting of lengths within jobs
Performing book production with a single imposition pattern can generate surplus pages, leading to waste paper and higher costs. EQUIOS Book Solution controls multiple imposition patterns and sheet lengths using barcodes. If surplus sheets are created when using 16 page imposition, a 12 page layout can be created to eliminate waste.

Compatible systems: Horizon Smart Binding System Tecnica Libra One Hordrissi CS40 HD / CS27
**Truepress Jet520HD specifications**

**Printing system**
Inkjet, Piezo single-pass DOD

**RIP**
EQUIOS

**Inks**
Truepress SC inks for Truepress Jet520HD

**CMYK (standard)**

**Resolution**
Max. 1,200 x 1,200 dpi

**Printing speed**
Max. 150 m (492')/min. (with option)*

**Printing width**
150 to 508 mm (6" to 20")

**Media width**
165 to 520 mm (6.5" to 20.4")

**Media thickness**
40 to 250 gsm
(64 to 157 gsm for the speed of 150 m/min.)*

**Dimensions (W x D x H)**
4,070 x 2,025 x 2,000 mm (160.3" x 79.8" x 78.8")

**Weight**
Approx. 4,050 kg (Approx. 8,910 lb)

**Power requirements**

- **Printer**
  - Controller: Three phase 200 to 240 V , 30 A / 380 to 415 V , 20 A
  - Heater: Three phase 200 to 240 V , 110 A / 380 to 415 V , 55 A
  - Controller PC: Single phase 100 to 240 V , 2 A
  - Additional dryer -Option: Three phase 180 to 220 V , 110 A / 380 to 480 V , 50 A (A separate 400 V step-up transformer is required when using 200 V facilities.)

- **Controller PC**
  - Single phase 200 to 240 V AC, 15 A x1 (can be installed in the rack for EQUIOS)

**Operating environment**
Temperature: 18 to 24°C (64.4 to 75.2°F) (no sudden temperature changes)
Humidity: 40 to 60% (no condensation)

* Under SCREEN conditions

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**Barcode reading function**
2D barcode: QR, Data Matrix, PDF417 (black 100%)
Placement angle: 0, 90, 180, 270 degrees
Background: white
(The necessary blank area around each code is based on the quiet zone of the code concerned.)

**Log**
Acquired through the user interface

**Decode results**
Saves all results and outputs them as a CSV file

**Power requirements**
PC: Single phase 200 to 240 V AC, 15 A x1 (can be installed in the rack for EQUIOS)

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**Space requirements**

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**Dimensions**

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**Real-time maintenance minimizes down time**

TRUST Network Service

TRUST Network Service is a proprietary support program provided by SCREEN to prevent unexpected problems. This program offers a full menu of services including predictive diagnosis based on monitoring equipment conditions, as well as regular analytical and maintenance reports. If trouble does occur, it is also able to precisely identify the area of malfunction.

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**Specifications of JetInspection (option) for Jet520HD**

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Placement angle: 0, 90, 180, 270 degrees
Background: white
(The necessary blank area around each code is based on the quiet zone of the code concerned.)

**Log**
Acquired through the user interface

**Decode results**
Saves all results and outputs them as a CSV file

**Power requirements**
PC: Single phase 200 to 240 V AC, 15 A x1 (can be installed in the rack for EQUIOS)

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**Full after-sales service network ensures more reliable system operation, helping to build a stronger production base and greater peace of mind for customers**

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**TRUST Guard**
- Practice maintenance using monitoring and diagnosis of equipment status
- Assessment of replacement timing for periodic replacement parts
- Provision of regular system analysis reports

**TRUST Dialog**
- User maintenance support (Control of dual-based client pages)
- Periodic analysis reports

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**TRUST Assist**
- Remote maintenance (Handing of software, setting parameter, operation errors)
- Analysis of problems, recovery (Remote diagnosis of hardware)

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Contact your local SCREEN representative for detailed information on TRUST Network Service.