XEIKON DCP-32/D & DCP-1/F

The Xeikon is a digital color web press based on a non-impact electrophotographic print process. The printing engine has eight in-line units allowing it to print on both sides in one pass. The Xeikon uses arrays of LEDs to expose the photoconductor plates on each cylinder of the printing units as the cylinder rotates. Images are produced with a special dry, small-particle, dual-component toner comprised of single line screens with continuous variable widths according to the amount of color needed.

Specifications:

Resolution:	600 dpi spatial resolution with Xeikon's proprietary screening at 150 lpi or FastRIP software RIP on DEC-Alpha (233 Mhz) printing clear centered rosette pattern at 170 lpi and optional automated trapping and imposition
Paper Size:	Roll-fed with paper width up to 12.6", variable cut sheet length, user programmable
Image Area:	Maximum image area: 12.1" x 408"
Paper Stocks:	Paper weight up to 12 pt. stock
Process Speed:	120 feet per minute (60 cm per second)
Input Options:	Xeikon offers 6 RIP options on 2 platforms, all of which are PostScript Level 2 compatible: Intel platform: Harlequin and Barco software RIPs DEC Alpha platform: Harlequin and Barco software RIPs, Printstreamer (2 versions: 16 & 32 Mb RIPs)
Throughput:	4,200 4-color 8-1/2" x 11" impressions per hour (2,100 duplex sheets) 2,100 4-color 11" x 17" impressions per hour (1,050 duplex sheets)

Features:

Automatic Duplex Printing (Perfecting)
Dual toner banks apply a precise array of 7.5-micron color particles to both sides in a single pass. This electrophotographic process produces high-quality color that holds serifs at three-point type without dot gain.

Electronic Collation & Finishing
The Xeikon DCP-1 adapts to a wide range of RIP, collating, and finishing options offered by AM Multigraphics. Xeikon has stated that it plans to introduce varnishing capabilities in the future.with a Watkiss in-line finishing unit that folds, staples, and stitches booklets. Xeikon is also working with Nilpeter to introduce another line of finishing products.

Personalization Option
Up to 100% of the page can be varied for each impression. Depending on the configuration, the DCP-1 has the ability to simultaneously print fixed and variable data to personalize names or other items on direct mail pieces with its Barco variable data system.

You Want It When?

The PrintStreamer is a very large, fast buffer for storing RIPed pages. It can transfer data at a rate of over 100 MB per second to Xeikon's multi-station imaging system. It has a storage capacity for 240 pages in uncompressed format or 4,800 typical text pages and 500 typical magazine pages compressed without loss of image quality. A page can be RIPped and on press in one to two minutes.

The pages can be printed in any sequence eliminating the cost and need for mechanical collating. Users can RIP multiple jobs to the PrintStreamer and use it as a queuing tool. In order to produce custom documents for clients, PrintStreamer enables printers to incorporate variable data over the entire page using a Quark Master Page with variable-data fields.

Xeikon will be offering even larger disks for PrintStreamer in the near future.

Future Considerations

Xeikon is working to add 5th and 6th colors to its product line. It is also working with the InterColor Consortium to develop a method for "Soft Proofing" jobs. The InterColor Consortium involves a number of firms cooperatively working to develop color-compliant device-profile standards to achieve accurate color with display monitors.

Printing Files

The LED arrays expose the photoconductor plates on each cylinder of the printing units with the page image during rotation. The system has variable spot intensity with each spot having 64 gray levels. Images are produced with a special dry, small-particle, dual-component toner (iron bead carrier then toner) comprised of single line screens with continuous variable widths according to the amount of color needed. Each color is placed at a different screen angle.

Sum It Up:

The Xeikon DCP-32/D delivers short-run four-color printing with impressive production values. Although the literature states that impressive "means realistic skin tones, incredible color detail, and smooth gray scales with a wide tonal range (...and...) it automatically replaces blends with proprietary, non-banding blends," there are still some bugs to work out with regard to large areas of flat tints, long blends, and burning toner at high ink coverage, all of which are common to the electrophotographic process.

The Xeikon DCP-32/D appears to be a fast, flexible web press that offers with many advantages over conventional presses including:
  • Personalization
  • Large finished pieces
  • Very tight registration
  • The ability to accept jobs in a variety of formats
  • The capacity to store a large number of jobs for quick RIPping (one to two minutes) and printing
  • Actual press proofs

Xeikon appears to have a dependable product and is forging alliances with companies that will continue to improve the product as technology advances. It has even liscensed the Xeikon engine to Agfa and IBM. Each of these OEM customers use a Power PC as the front end to manage the production process.

Sources:

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Chromapress, Agfa USA: The Agfa/Apple Digital Color Printing World Tour, Short Run Color & Digital Color
                        Printing: Market and Business Opportunities, Bob Barbera, Sr. Business Line Mgr.
Tim Wheedledryer   Xeikon marketing department, telephone interview (also spoke to a "Techie in the very
                        back room," but did not get his name).
                        Written by Ken Kaleta, 1997