All-Round “ElecRoc” Mixed Printing Production Process

1 Professional Digital Printing Proces.

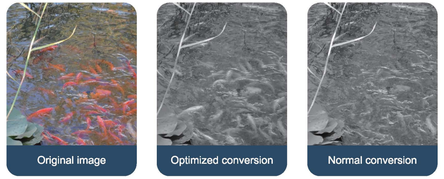
Large Chinese font support is well compatible with various software file formats, which realizes the workflow processing of file standardization. imposition& composition, color management, as well as RIP output printing. The process protects the visualization,safety,efficiency and convenience.

"ElecRoc" effectively intearates customers' existing producion eauipment. and meets the applications in the fields of government printing, book POD, business printing, digital printing, brochures, and others.

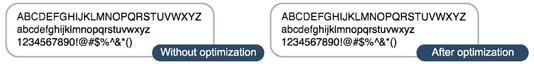
2 Core Technology Of Color And RIP To Ensure Quality

The strong RIP cluster control ability of "ElecRoc" ensures the processing efficiency of massive files,which becomes the basis of full-speed printing.

The optimized conversion from color to gray image, as a core technology, is developed to realize the high consistency between gray image and color manuscript in the reduction of gradation level details.



Text edge optimization technology can effectively eliminate the jagged edges of text, thereby achieving the best printing effect of texts.



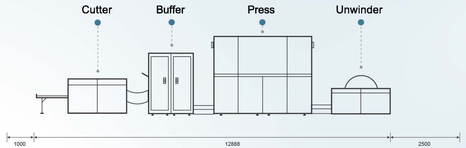
Text processing technology applied on outines shows advantages on maintaining outines smooth and slight to guarantee text quality.

3 Full-Featured Inkjet Imposition And Folding Function

The function provides flexible and diverse imposition methods for books and periodicals printing, and at the same time supports perfect bound, saddle stitch, sewing, and other binding methods. That means one production line can be applied to different business types of customers to enhance production efficiency.

It also provides a variety of inteligent maks, including one-dimensional codes and two-dimensional codes, which can efectively meet customers' identification needs for production marks of traditional and digital post-press equipment, and make full use of existing post-press equipment to improve production efficiency.

LQ-MD 5600HD Roll-to-cut Deployment Diagram



Perfect Localized And Fast Service Support.

The UPGJET's localized professional team provides fast and high-quality services including system maintenance, repair, upgrade, etc. Localized production of whole machines guarantees a fast supply of accessories and actual production.

Remote Diagnosis

Combining with the market demand and the actual needs of customers, UPGJET has developed a remote diagnosis platform for inkjet equipment. With the Internet as well as real-time data analysis and processing technology, the platform can reduce downtime of equipment, and improve the efficiency of after-sales service, thereby providing faster, more accurate and more reliable service.

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Web

LQ-MD 4400HD/5600HD
High-Definition Mono Color Inkjet Digital Press



HD Mono Color Duplex Inkjet Digital Printer
4400HD/5600HD



After greatly successful mono-color inkjet web presses, LQ-MD 4400/5600 series, developed

A High- Definition Mono- Color Inkjet Web Press

—LQ-MD 4400HD/5600HD in June 2022. With the benefits including high quality comparable to offset printing, lower ink cost, efficient and stable production release, and extended service life, the new-generation HD inkjet press will become the key factor for customers in the market competition by its excellent printing quality and lowest comprehensive cost.

High Quality Completely Comparable To Offset Printing

1 High-precision Printhead

With the help of industrial piezoelectricity of 1200DPI and more sophisticated technology for controlling the combination of multi-level ink droplets, the printed image is presented perfectly with minimal graininess, smoother color tones and richer gradations.The fine texts and lines with sharp and smooth edges provide a perfect appearance.

2 High-precision Printhead Assembly

High-precision aloy materials as well as advanced processing and assembling technologies are adopted to ensure precisely utilizing of the printhead.

3 New Mechanical Platform

Perfect spray shape and precision of ink droplets are realized by controlling printhead height accurately.

The structure of the roll group and assembly process have been optimized precisely, which ensures the roll-to-roll stability of paper running in the state of high speed up to 150m/min.

Unique and reliable synchronous control technology at high speed.

The encoder combined with blue-ray technology supports the exact match between the spray from the printhead and the paper moving, which improves effectively to ensure registration accuracy and uniformity of color tones.

Brand-new closed-loop tension control system

Real-time tension compensation and digital control are realized during running, which fully guarantees the stability of moving paper and thus greatly enhances the stability of high-speed printing.

4 Specific High-Performance Ink

The specific aqueous pigment ink made by top ink manufacturers could be applied to a wider range of papers, with its excellent permeability and adhesion characteristics, blackness, and drying performance.

5 New Inkjet Screening Technology

Based on the " UPGJET inkjet halftone screening technology" dedicated to UPGJET inkjet equipment, combined with the characteristics of 1200dpi printhead and permeability and adhesion of ink on paper, the multi-bit depth variable ink-droplet screening technology was specifically designed to intelligently distribute the ink-droplet size and configure automatically best screening mode.



This screening technology has presented better printing quality with less ink amount, which reduces the drying requirements of pages with large ink amounts, and thus effectively improves the printing stability of large-ink pages at high speed.

6 Founder ColorTools Color Management Technology(Inkjet Version)

Combined with the characteristics of inkjet technology a number of technological innovations have been broken through, such as workflow color management technology, AI color separation control technology, etc. These technologies not only realize the one-key operation of linear calibration of industrial inkjet printing but also significantly improve the brightness and smoothness of the output image.

By improving the algorithm of color and screening, extremely high light dots can be shown on the paper, so that the gradient level can be optimized.

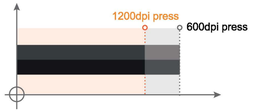
UPGJET combines the 1200dpi high-precision industrial printhead with tiny ink droplets and constantly perfected technologies including the web mechanical platform, upgraded tension and drying system, new RIP screening, text processing, color management as well as high-performance specific ink, etc.Therefore, the new-generation press has realized brilliant printing quality which is superior to that of offset printing on inkjet digital printing paper, And comparable to that of offset printing on common offset uncoated paper.That means high productivity and market competitiveness in the mid-to-high-end printing market for customers!

Ultra-Low Ink Cost

1 Improved Screening Technology

Better printing quality with less ink amount.
Compared with 600dpi presses,the ink amount in HD presses can be saved by 30%-40% under the same printing conditions.

UPGJET also developed an ink calculator, which helps to estimate the ink consumption before printing.



2 Upgraded Ink supply Technology

The latest sixth-generation circulating ink supply system greatly reduces nozzle clogging, which decreases ink wasted in cleaning maintenance by 50%.

Super Service Life

Casting structure and advanced assembly technology applied on the base and wallboard of the mechanical platform ensure the structural stability and shock resistance of the whole machine in long-temm operation, which helps to match the service life of offset presses.

The servo control system from well-known brands is accurate. stable. and durable, which is reliable to ensure safe and stable paper transmission, matched with paper breakage, double sheet and tail detection. etc.

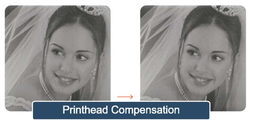




Digital Printing Cutting System

1 Minimize the Downtime Caused By Nozzle Clogging

Circulating ink supply technology with online detection (optional) greatly reduces the probability of nozzle clogging, and at the same time realizes the function of automatic white-ine compensation, which protects the whole printing of one or more iobs,without stopping to maintain nozzles.



2 Efficient Paper Roll Replacement

The new-generation presses continue the UPGJET's convenient operaion design of uncoling system for paper rol loading and unloading, which ensures efficient paper roll replacement.

3 Multi-technology avoids wrinkles and dirt of large-ink jobs in high-speed production.

The upgraded drying system highly improved the drying capacity of large-ink-amount jobs.

The page ink drop processing technology can reduce separately target ink for pages with super-large ink amounts, which realizes the high-quality printing of the whole job.

4 Digital Printing Cutting System

Introduce the post-press technology of internationally famous manufacturers.

With international quality standards, UPGJET greatly reduces the equipment investment, and at the same time guarantees the production stability of UPGJET inkjet presses to the greatest extent.

Stable, continuous high quality and high-production releases can help customers to take more orders during peak production seasons and reduce expenses including the depreciation of equipment, labor, field rent, energy consumption, equipment maintenance, and others, so as to realize real comprehensive cost competitiveness.

1200DPI Mono-Color Inkjet Press Technical Specifications

Printing mode	LQ-MD 4400HD	LQ-MD 5600HD
Technical Specifcations		
Printing type	Monochrome duplex	
Resolution	1200×1200dpi、1200×960dpi、1200×840dpi、1200×600dpi	
Print speed	150mmin Max*	
Connect Cutter speed	100m/min Max*	
Registration accuracy	±0.5mm(Front and back)	
Printhead	Industrial Drop-on-demand Piezoelectric	
Ink droplet size	1.5pl、3pl、5pl	
Ink	Water-based pigment ink	
Dry method	Infrared dryer (automatic adjustment on printing speed)	
Digital front-end	Eagle Jetinkjet™ imaging system (Windows Server based)	
Paper		
Max. media width	560mm	560mm
Max. printing width	440mm	540mm
Paper type	Uncoated paper,inkjet coated paper,newspaper#	
Media thickness	45 gsm -165 gsm	
Max.roll diameter	1270mm	
AC power		
Mechanical platform	380Vac115KW	
Dryer system	380Vac135KW Max	
Digital controller system	220Vac13KW	
Operating environment		
Temperature	22 5-27 5℃,the best working temperature is 25℃	
Humidity	40-70RH,no condensation, the best working humidity is 50-60%RH	

*The actual speed is influenced by different papers and files.
#The brand and specifications recommended by Party B.

Digital Printing Cutting System Technical Specifications

Items	Parameters
Cutting speed	137m/min,connect inkjet press 100m/min(max.speed)*
Paper Weight	40g-200g(Some papers need to be texted.)
Web width	140-560mm
Stack length	90mm-710mm
Stack height	250mm
Max.stagger distance	15mm
Power	220V，50HZ，10A

*The actual speed is influenced by different papers and files