Technical Parameters:

Model	**Kirin440HD**	
Technology	Single-pass, piezoelectric inkjet	
Ink Type	High-performance water-based pigment ink	
Droplet Size	Small Droplet: 2 pl	Medium Droplet: 4 pl
Printing Method	Single-color double-sided printing	
Resolution & Speed	1200*1200 DPI	100 m/min
	900*1200 DPI	135 m/min
	600*1200 DPI	200 m/min
Max. Inline Feeding Speed	150 m/min	
Max. Cutting Speed	120 m/min	
Feeding	Roll to sheet	
Substrate	Offset paper, digital paper, etc.	
Paper Weight	45-165 gsm	
Web Width	75-440 mm	
Max. Web Width	440 mm	
Max. Print Width	432 mm	
Max. Roll Dia.	1200 mm	
Power Requirements		
Power Supply	AC 380 V / 50 Hz	
Drying Method	Infrared + hot air	
Power	Printing Unit:55 kW； Converting Unit:15 kW	
Dimensions	11850*3100*2360 mm	
Working Environment		
Temperature	18 - 24°C	
Relative Humidity	40 - 60%	

Industrial Digital Inkjet Comprehensive Solution Provider

- Independent printhead-drive technology
- Self-developed control system
- Self-developed MES system
- Independent ink industrial chain
- Remote service maintenance system and local services

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V1.0/2025

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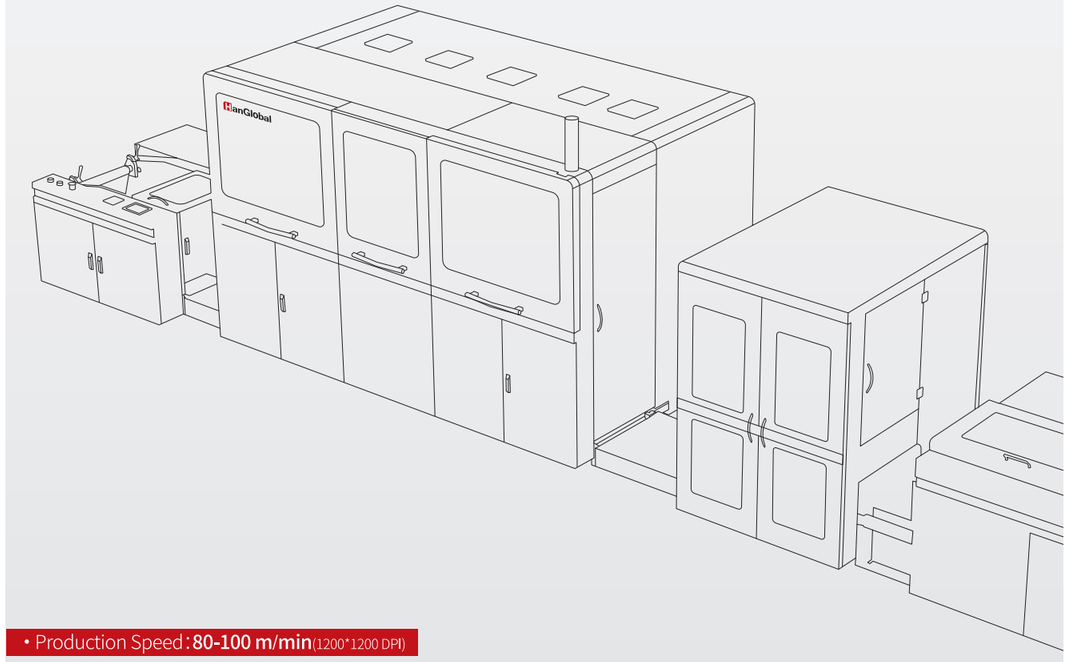
Kirin440HD

1200DPI Monochrome Digital Inkjet Roll to Sheet Solution

HD Monochrome Print-on-demand Printing System
Integrated Automatic Cutting and Stacking All In One



- Production Speed：**80-100 m/min**(1200*1200 DPI)
- Max. Resolution：**1200*1200 DPI**
- Max. Feeding Speed：**150 m/min**
- Max. Printing Width：**432 mm**
- Max. Web Width：**440 mm**

Kirin440HD
Roll-to-Sheet Solution

Integrated Full-Process Roll-to-Sheet Production
(standard)

Unwinding

⌄

Web-Guide

⌄

Print On Demand
Reverse-Return Flipping
+
efficient drying

⌄

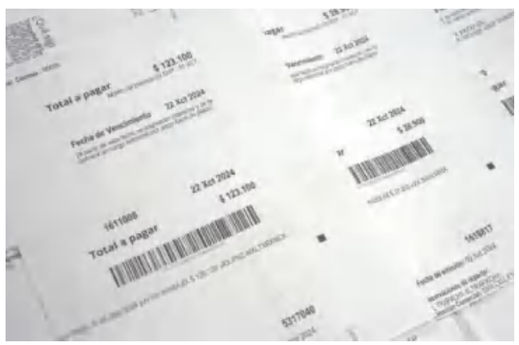
Cutting and Stacking
(Optional)

Variable Printing of Bills

VDP function supports adding different data (such as serial number, barcode, QR code or personalized information, etc.) to each print, which is very suitable for printing bills, labels, logistics documents, etc.

Front-Back Registration and Mark-Reading Printing

- **Mark-Reading Printing(Optional):** Enables precise partial printing on pre-printed materials.
- **Front-Back Registration Printing(Standard):** Ensures high-precision alignment of front and back pages.
- This function is critical for applications in book, ticket, label, and packaging printing.



High-Speed Inkjet System

New 1200 DPI Industrial Grade Piezoelectric Ceramic Recirculation Printhead

- **The unique circulation nozzle structure enables stable printing**

  Uniform temperature management effectively suppresses ink sedimentation.
  Effectively reduce maintenance costs during restart operations such as printhead cleaning.

- **Higher resolution & higher firing frequency & more nozzles & smaller droplets**

1200*1200 DPI	80K Hz	5116	2 pl~4 pl
Max. Resolution	Firing Frequency	More Nozzles	Drop Size

- **It supports single-color double-sided printing, which is comparable to the speed and quality of offset printing**
- **Automatic double-sided printing:** double-sided high-speed output, improve efficiency.
- **Comparable to offset printing quality:** fine text/lines are clear, sharp, ghost-free, and uniform in ink output.
- **Paper adaptability:** offset paper, digital paper, newsprint, cardboard, lightweight paper, pure paper, etc.

100 m/min (1200*1200 DPI)	150 m/min
Max. Printing Speed	Max. Feeding Speed

- **Mature application of large monolithic piezoelectric crystal technology**

  The technology utilizes proprietary material design techniques to create dense polycrystalline ceramic actuators, and thin piezoelectric ceramic substrate fabrication techniques to ensure uniformity of image quality and improved print quality inside the printhead.

- **Perfectly inherit the single pass core technology**

  Based on precise design and solid manufacturing, the new Kirin440HD takes on advanced Single Pass printing and piezo inkjet techs. Driven by multi-functional software and hardware, it secures competitive speed, quality and stability.

High-Efficiency Digital Printing & Converting System

The automated post-press cutting & efficient stacking & collating system reduces labor costs and enhances productivity, meeting the demands of large-scale flexible production and rapid delivery. Seamlessly integrated with front-end unwinding and printing processes, it enables end-to-end automated production, minimizing intermediate time losses and streamlining the entire workflow.

- **Fully Automatic Inline Connection:**
  Printing and cutting units are seamlessly connected by a buffer unit.
- **Advanced Cutting Technology:**
  Achieves vertical and horizontal cutting, offset book-splitting, and suits thin-paper cutting.
- **Non-Stop Stacking Output:**
  Inline cutting speed up to 120 m/min.
- **Offset Book-Division and Stacking:**
  Directly results in book cores, obviating the need for post-process page-collating and book-division.
- **Flexible Post-Processing:**
  Can be cut into quarto-sized formats as per user demands and is compatible with folding, page-collating, etc.

▼ cutting module

Kirin440HD Comprehensive Soluton

Ink

Self-Developed High-Density Low-Moisture Pigment Inks

With an independent ink industry chain, we independently develop water-based pigment inks with technical barriers, offering more cost advantages in ink pricing.

Significantly Improved Color Density:
Achieves the same color rendering effect with less ink usage.

Fast Drying Speed:
Low-moisture inks reduce post-printing drying time, enhancing production efficiency.

Wider Media Range:
Minimizes the impact of water penetration on paper or other media, expanding printable substrates.

Excellent Durability:
Pigment inks offer strong UV resistance and are less prone to fading.

Energy Saving and Consumption Reduction:
Low VOC content reduces power consumption of hot air or UV drying equipment.

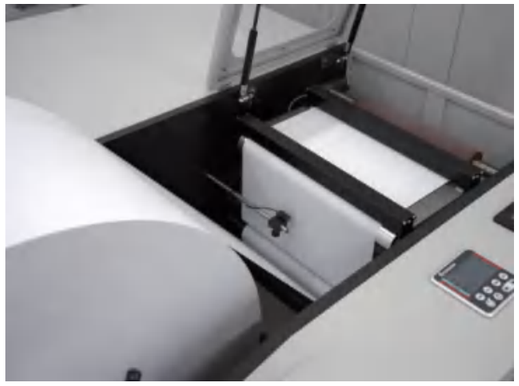
Ink Savings of 30%

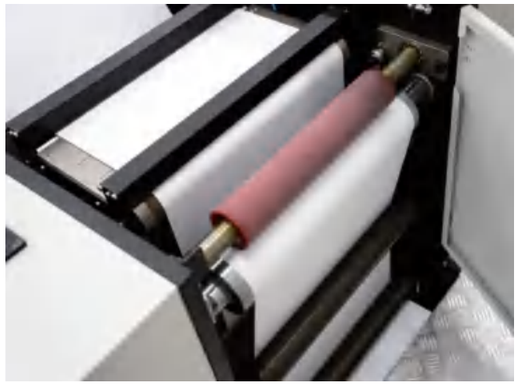
- **Nozzle-Level Recirculation:** Ink is less likely to dry out and needs less ink purging.
- **Smaller Ink Droplets:**
  Droplets reduced to 2pl-4pl, combined with 1200×1200 DPI high-precision output, ensure stronger coverage and less penetration.
- **High-Performance Water-based Pigment Inks:**
  Significantly improve color density for optimal print quality.

Hardware & Software

Frame Stability (Market Testified Classic Models)

- **Modular & Compact Design:**
  The equipment is compact and attractive, with a short paper path and small footprint. It saves materials and offers higher paper feeding precision.
- **Reinforced Frame:**
  It ensures the equipment's high precision and reliability during long-term high-load operation.
- **High Precision Paper Guide Rollers:**
  Roller runout ⩽ 0.015 mm; post-assembly runout ⩽ 0.02 mm.





Inkjet Stability(Ink Recirculation)

- **Effective Prevention of Nozzle Clogging:**
  Ink recirculation prevents ink from drying out or clogging, and ensures that the ink inside the nozzles is flowing even when the print job is paused.
- **Enhanced Inkjet Stability:**
  Ink recirculation evenly distributes heat during printing, preventing nozzle overheating. This ensures consistent ink state and high-quality prints.
- **Less Maintenance Required:**
  Continuous ink circulation reduces nozzle cleaning frequency and waste, improving overall operational efficiency and saving maintenance costs.

Transmission Stability(Multiple Technologies Support)

- **Multiple Tension Control System:**
  With high control precision and minimal tension fluctuations, it ensures smooth and efficient web transmission.
- **Tripod- Free Paper Reversing Mechanism:**
  Web path design that enables front-and-back printing without a reversing mechanism, ensuring greater stability during high-speed double-sided printing.
- **Web-Guide System：**
  Ensures stable and consistent paper transmission during high-speed operation.
- **Servo System：**
  Both unwinding and rewinding modules adopt servo control systems for precise and stable performance.

Ultimate File Efficiency
Based on Advanced Digital Processing Workflows

Combining efficient file handling and pre-press management with intelligent production collaboration and advanced digital inkjet technology, it has revolutionized the traditional book printing model. This integration automates and enhances the entire process from file handling to finished product delivery, resulting in unprecedented improvements in efficiency, cost savings, and quality assurance.

Exceptional Parsing Accuracy
Based on A Professional Printing RIP Engine

- **Superior Parsing:** Accurately parses domestic and international PDF files, precisely restoring content.
- **Exceptional Color Reproduction:** Closed-loop ICC color management ensures high-fidelity color and vivid details.
- **High-Precision Dots:** Fine dots offer high-accuracy imaging, with multiple dot types for diverse printing needs.
- **Comprehensive Tech Support:** Anti-aliasing, edge-sharpening for text, overprinting, and spot-color processing.