Parameters

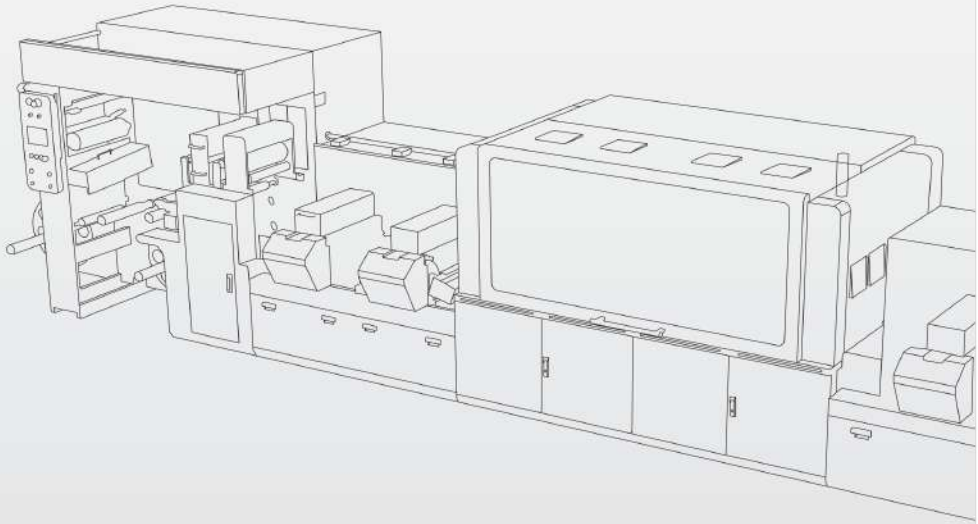
Model	LabStar330HD Hybrid
Production Mode	
Production Speed	80-120 m/min
Max. Resolution	1200*1200 DPI
Ink Configuration	
Ink Type	UV Ink
Color Config	Standard: White + CMYK, O,G,V as options
Print Substrates	
Applicable Materials	PET/PVC/PP/PE/BOPP films, synthetic paper, coated paper, aluminum foil, etc.
Material Width	75-350 mm
Max. Print Width	322 mm
Max. Roll Dia.	800 mm
Roll Core Dia.	3" (shaft)
Material Thickness	0.02-0.5 mm
Feeding Method	Roll-to-roll
Roll Change Method	Dual-arm pneumatic lifting
Equipment Specifications	
Dimensions	11928*1500*2350 mm (L*W*H)
Net Weight	13000 KG
Power	40kW / AC 380V
Air Source	Industrial air source, 0.6-0.8 MPa, clean and water-free
Operating Environment	18-25℃, independent, clean, low-dust, low-light, well-ventilated
Relative Humidity	40-65%(non-condensing)
Input Formats	TIFF, PDF, etc.
UV Curing	Combined UV drying (LED + UV Mercury)
Data Transmission	High-speed PCIE
Additional Features	Web guide, tension detection, corona treatment, dust removal, static elimination, modular drying, paper break detection, defect detection, automatic roll diameter detection, automatic material thickness detection, automatic ink consumption detection, full servo control system

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

LabStar330HD Hybrid

1200 DPI High-Speed Hybrid Label Printing Production Line



1200 DPI
Max. Resolution

80~120 m/min
Print Speed

322 mm
Max. Print Width

Flexible Modular Configurations:

Customize with 8-color digital printing, multi-color flexo, letterpress, hot stamping, adhesive-side printing, lamination, die-cutting, matrix removal, non-stop unwinding/rewinding, automatic splice avoidance, and inline digital enhancement for versatile, high-efficiency production, etc.

「Digital + Flexo」
Diversified Combination Solutions

Seamlessly integrate material unwinding, printing, enhancement, and finished product slitting/rewinding into a single automated line. Combine multiple processes for one-pass label production, boosting efficiency, reducing labor costs, and delivering premium labels

Core Advantages of the Solution:

- Fully automated, one-pass production for multi-process labels
- High efficiency: 80–120 m/min at full 1200 DPI resolution
- Powered by Single Pass,1200 DPI technologies and self-developed control system
- Flexible multi-color combination solutions, upgrading to an 8-color digital solution
- Wide color gamut, multi-process combination, transforming into infinite possibilities
- Achieving rich applications such as multi-layer labels, transfer labels, and anti-counterfeit labels
- Streamlined digital workflow for efficient, high-quality output for intuitive, intelligent operation

LabStar330HD Hybrid Comprehensive Solutions

• High-Speed Inkjet

Brand new 1200DPI industrial-grade piezoelectric ceramic circulating printhead application

- 2pl, smaller ink drop output, more stable dots, smoother ink drops
- Ink drop density makes printing fuller, large solid areas smoother, and small ink drops make details clear and sharp
- Dense 4pl ink drops ensure vibrant colors, smooth large areas, and crisp details. White ink achieves up to 70% opacity in a single pass
- Synergizing mature Single Pass technology with piezoelectric inkjet technology, ensuring high-speed quality through comprehensive integration

8-color Digital Solution (W+CMYK+OVG)

- **Standard Model:** White+ CMYK

Optional Configurations:

- Add 1–3 spot colors (Orange, Violet, Green) for expanded color gamut
- Supports optional configuration of 1-2 sets of inkjet varnish/matte varnish/3D varnish/reverse varnish, etc., to achieve special effects
- Integrate flexo, hot stamping, or enhancement modules for a fully customized hybrid line

• Multi-Color Flexo

Supports multi-color addition

- Compatible with multiple printing technologies
- Meets multi-functional one-pass streamline production
- Flexibility at your own needs before or after inkjet

High-precision spot colors

- High solid color density, efficient and uniform printing of large background areas
- Excellent performance on film materials such as PET, BOPP, and PE
- Special label applications (multi-layer labels, transfer labels, anti-counterfeit labels, etc.)

• Hot Stamping Enhancement

Pioneering Digital Hot Foil Stamping

- Breakthrough achievement of digital plateless hot stamping, capable of 0.1mm ultra-fine line hot stamping
- Precisely presents over 10 special metallic effects such as rose gold, matte gold, and laser gold
- Supports partial and full-area hot stamping, meeting the complex texture hot stamping needs of luxury labels

Cold Foiling

- A flexible hot stamping solution without a heat source, friendly to heat-sensitive materials
- Higher process flexibility, supporting front and back cold foiling, reducing costs and processes
- No need for traditional hot stamping heating devices, saving processes and costs

Holographic Flat-bed Online Positioning Hot Stamping (Optional Configuration)

- Based on flat-bed hot stamping, integrating holographic imaging technology and real-time positioning system to achieve high-precision hot stamping and anti-counterfeiting information
- Responsible for combining holographic patterns with online positioning hot stamping, providing precise traceability performance for high-value products (e.g., luxury goods, pharmaceuticals)
- The holographic effect gives labels a unique luster and three-dimensionality, overlaying with the metallic texture of hot stamping to create a luxurious visual experience

• Varnish Module

Varnish/Matte Varnish

- Flexible enhancement, free switching between spot varnish, matte varnish, or full-area varnish
- Simple process, excellent durability, smooth varnish edges, good matte varnish uniformity
- Fine line texture varnish inkjet printing, min. can reach 0.07mm

Reverse Varnish

- High-contrast relief and light/shadow effects are widely used in labels for daily chemicals, wine, etc.
- High hardness, strong wear resistance, smooth touch, environmental safety, and low odor after drying
- Simulates reverse varnishing to achieve various effects such as fine sand, medium sand, and coarse sand, completing high gloss-matte contrast in one go

• Inline Digital Enhancement

Industry-innovative Hanlabel Ultra digital enhancement unit

- Supports standalone offline application or inline enhancement with digital printing machines, flexibly responding to label processes on demand
- Simultaneously achieves digital cold and hot dual stamping (first of its kind),rich varnish overprinting, and fine 3D text effects, replacing rotary screen printing
- The printheads have automatic cleaning, moisturizing, and waste ink recovery functions,adapting to a wider range of label materials, such as heat-sensitive ones

72 m/min
Max. Capacity

4800*1200 DPI
Max. Precision

0.3 mm (max.)
Varnish Thickness

• Backside Adhesive Printing

Innovative combined process achieves more precise front-to-back registration

- Industry innovation! Combining the backside adhesive printing unit from the flexo units to the end of the LabStar digital inkjet unit
- Ensures the safety of the material for secondary compounding with the printheads and front-to-back registration, controlling front-to-back printing errors within ±0.1mm
- Widely applied in fields with high safety and compliance requirements such as food and pharmaceuticals, a common anti-counterfeiting method for high-end labels

• Letterpress Solution

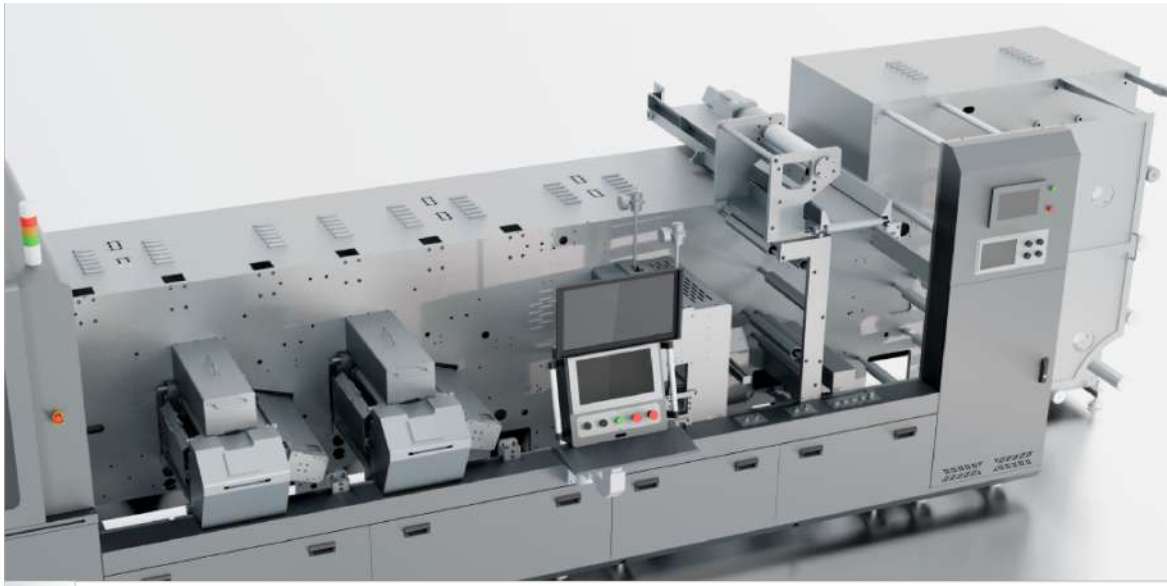
Diverse processes for special effects

- **Significant tactile embossed/debossed effects:** graphic height can reach 0.1-0.3mm, greatly enhancing label quality
- **Strong ink opacity:** suitable for printing white or light-colored graphics on dark or metallic foil materials
- **Efficient inline production:** "flat inkjet + 3D tactile" unique effect completed in one pass

• Screen Printing Solution

Diverse processes for special effects

- **Strong compatibility with special inks:**
  such as fluorescent ink, thermochromic ink, suitable for thick film printing (50-300μm)
- **Outstanding opaque printing capability:**
  digital printing machine adapted with rotaryscreen unit, applied for light blocking on special electronic products. Screen printing features large ink volume, strong adhesion, and good opacity
- **Low-cost small batch advantage:**
  plate-making cost is lower than letterpress, suitable for small orders of high-end personalized customization



• Lamination Process

Integrated lamination into one streamline process

- Supports a rich variety of film types such as BOPP, PET, glossy, matte, and mono films
- Automatic tension control prevents film stretching and deformation, enabling integrated inline compounding production

• Die-Cutting Process

Integrated converting into one streamline process

- Flexible selection of intermittent die-cutting and full-rotary die-cutting on demand, with integrated automatic cutting and forming
- Worry-free cutting of irregular labels, and no need to change magnetic anilox rollers, reducing production cost
- Flat-bed die-cutting has low cost and fast delivery, customers can choose the die-cutting method according to actual needs

• Matrix Removal Process

Integrated matrix into one streamline process

- Non-stop matrix removal and snowball matrix removal are optional, improving waste material handling efficiency
- Direct post-die-cutting waste removal eliminates secondary processing

• Continuous and Intelligent Production

Non-stop unwinding & rewinding & auto splice avoidance

- Automatic unwinding and rewinding technology allows for easy loading and unloading of large orders without stopping
- When a material splice enters the digital printing unit, the inkjet unit will automatically recognize and intelligently avoid it

Core Strengths

Strong combination of digital and traditional

- **Mastering core digital inkjet technology**
  - Possesses the ability to independently research and develop core printhead drive systems and overall control systems
  - Proficiently masters the application of industrial-grade Single Pass technology and piezoelectric inkjet technology
  - Collaborating with international inkjet giants, inheriting over ten years of stable inkjet production experience
  - Mastering special printhead splicing, software and hardware processing, etc., providing comprehensive technical support
- **Perfect inheritance of core flexo technology**
  - Inheriting over 20 years of rich experience in the label machinery industry, with solid technical strength
  - Powerful multi-process expansion capability, integrating various traditional printing technologies
  - Mastering core label machinery technologies such as high-precision registration and web tension control
  - Closely following international market demands, innovatively achieving personalized customization of various processes

Diverse Technology & Function Support

- **Stable Web Feeding Design**
  - **1.2m 8-color rainbow bridge for precise registration and printhead protection**: ultimate registration precision, avoiding printhead scratching due to material warping
  - **Printhead linear splicing and stitching technology**: achieves seamless full-page graphic printing, printhead positioning accuracy can reach micron level
  - **Printhead constant temperature control system**: printhead temperature is constant, no color difference during continuous operation, stable color for long orders and reorders
  - **Servo unwinding and rewinding system**: stable tension, one-button lift for easy roll change, efficient and smooth feeding for super large paper rolls.
  - **Multiple water cooling systems** (printheads, UV water-cooled rollers, baseplate, etc.): supports thermal paper, heat shrink film, single-layer film, etc.
- **Intelligent Printing Design**
  - **Seamless job change system**: unlimited plate length, seamless pattern printing, over 90% of label materials do not require pre-coating
  - **Intelligent operating system**: integrated control interface, convenient, worry-free, easy to learn, easily achieving one-person multiple-machine operation
  - **Order management system**: supports file loading without stopping, flexible adding, inserting, deleting, and reordering jobs
  - **Full-color variable data**: supports various dynamic variable data & graphic printing, precise details clearly recognizable
  - **Intelligent standby design**: instant production recovery, truly achieving "print one piece" ultra-short order production
- **Cost Saving Design**
  - **Super save intelligent paper saving system**: intelligent back-tracing for continuous printing, saving waste during job changes
  - **Innovative mechanical structure design**: integrated, modular, requiring less floor space
  - **Re-registration function**: significantly reduces material and time waste during overprinting
  - **Accurate ink volume calculation software**: achieves ultra-low ink consumption, precisely controlling ink costs
- **Printhead Protection Function**
  - **Warping detection and automatic avoidance technology**: protects printheads, reduces downtime, and prevents material waste
  - **Comprehensive material thickness & paper break detection**: prevents printing interruptions, material arching and rubbing against printheads
  - **Fully automatic printhead maintenance function**: integrated control interface for easy operation, extremely low maintenance costs
  - **Anti-power outage negative pressure protection system**: no ink leakage during sudden power outages, continuous and stable order printing.

Breaking Through for
Value-Added Orders

Wide Range of Application

Labels

Electronic Products

Logistics and Warehousing

Packaging

Special Packaging

Printing Materials

Paper Types	Film Types	Special Applications
Glossy Coated Paper, Matte Paper, Thermal Paper, Synthetic Paper, Special Paper, etc.	Mainly synthetic film materials (such as PE, PP, PVC, PET, etc.)	Metal Aluminum Foil, ABL/PBL, Folding Cartons, etc.