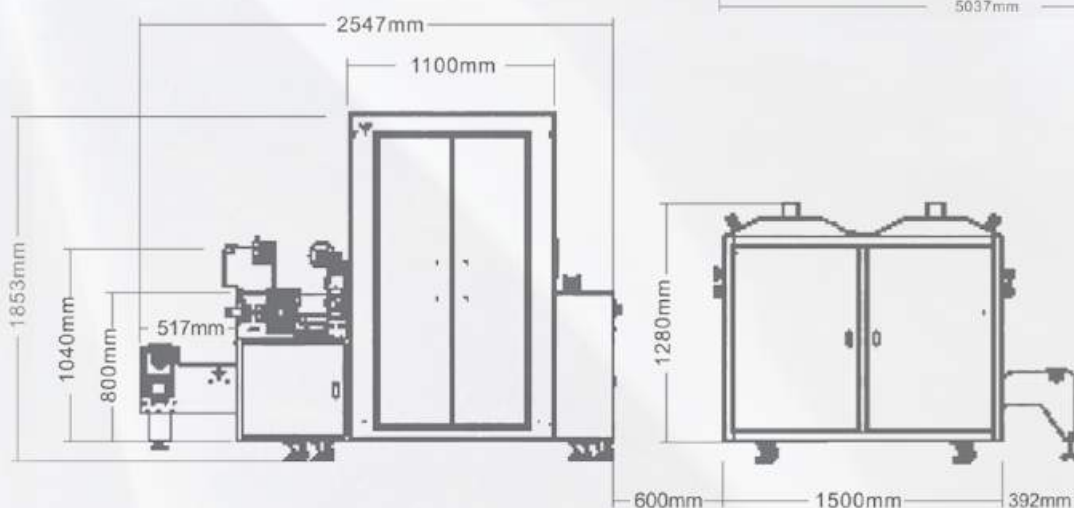
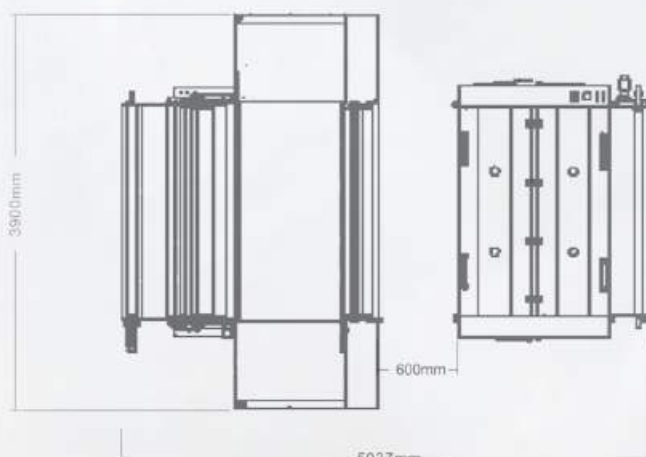
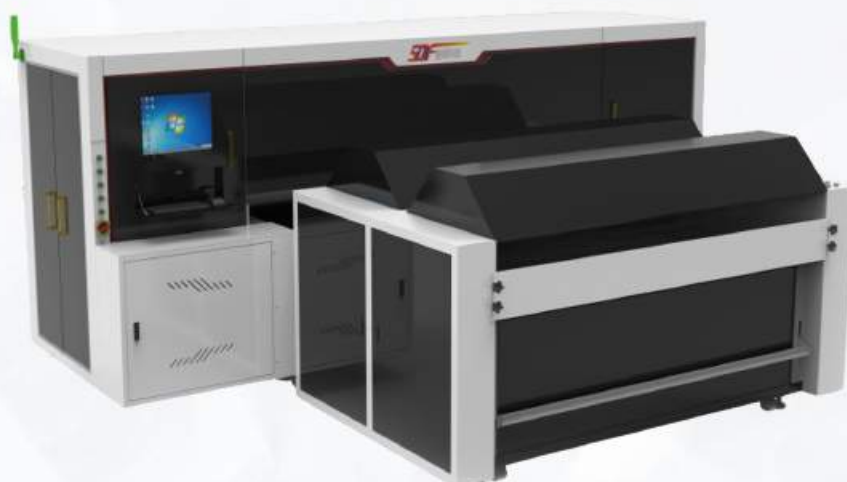




PRECISION DIGITAL TEXTILE PRINTER

With Computer Vision for
Accurate Print Placement

with RICOH Gen6
Printheads



Technical Process



Precision digital printing uses advanced computer vision and real-time control to achieve perfect image alignment on textiles. Initially developed for warp and weft recognition, it now enables accurate printing even on semi-finished fabrics with patterns like jacquard or printed logos.

By analysing surface features, the system adjusts print placement in real time - ensuring consistent, high-quality results. As vision and control technologies advance, this method offers vast potential across intricate textile applications, including cross-stitch designs.

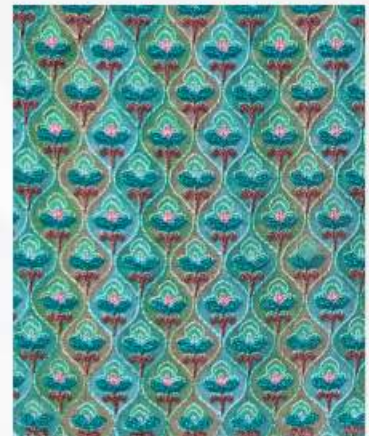
With ongoing advancements, water-soluble, disperse, and pigment inks are also widely used, and applications have expanded from sarees, dress materials, laces, to insoles, pillows, and cushions and a growing range of products.

► Applications

1



Inkjet Printing on Embroidered Fabric : Traditional embroidery is limited in color range and detail compared to digital printing. Position printing requires only outline or white contours of embroidery design, reducing production costs. This method combines the three-dimensional texture of embroidery with the vibrant colors and fine detail of digital printing, enhancing the product's quality and appeal. With camera-based localization, the printer automatically detects and aligns the design, making the process faster, more accurate, safer, and far less labor-intensive.



2



Inkjet Printing on Lace Fabric

: Traditional lace is typically made from dyed or pre-printed fabrics. Precise location printing now allows printing directly within the lace contours, making it a key technique for producing high-grade lace.

3



Inkjet Printing on Jacquard Fabric

: High-grade jacquard fabric is woven using advanced jacquard techniques. Precise location printing allows accurate positioning of even small letters and intricate contours, making it ideal for high-end clothing like brocade sarees, bags, and other luxury applications.



4



Inkjet Printing on Wedding Dress Fabric

: Most wedding dress fabrics on the market have limited color options. Precise location printing enables accurate contour printing, expanding the color palette and adding a modern, fashionable touch to traditional materials.

► Operating Principle

It uses high-definition industrial cameras to capture detailed images of the fabric. The built-in image processing software identifies the warp, weft, and design to generate an accurate contour scan. Based on the fabric's longitude and latitude angles, the system can rotate, scale, or otherwise adjust the image before printing. This enables printing of any image in any orientation.

- Software included : Puzzle software, Image RIP software, Printing software
- Hardware included: High-definition industrial cameras, PCI high-speed image processing card
- Application areas: Cross-stitch fabric printing, jacquard and embroidery fabric printing, shoe materials, leather, and position printing of any kind

► Technical Advantages

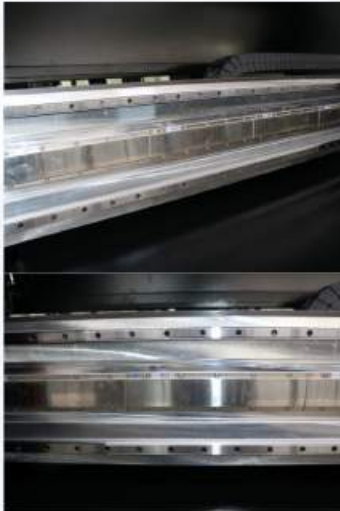
- Automatic Alignment Printing
Uses computer vision technology to detect the position of semi-finished products (e.g., fabric pieces) and control the print pattern to ensure precise alignment during printing.
- Chromatography Printing
Uses equipment stations for online printing control, and process design to identify print locations for accurate trapping print in offline production.
- Jacquard Colour Filling
Determines the print position based on jacquard patterns to achieve precise jacquard colour filling during printing.

► Technical Parameters

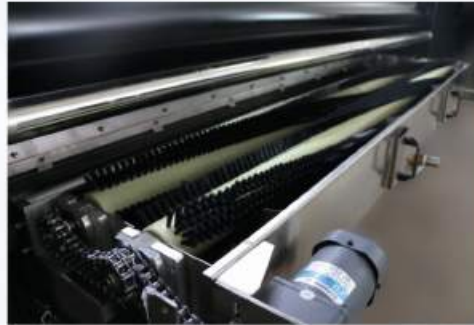
Print mode	Ricoh G6 High Speed Belt Type Digital Printing Machine	
Print speed <i>All speeds will vary according to the movement speed of the trolley and the medium requirements.</i>	16 heads (8 color)	
		
	2PASS 600*600DPI	240m ² /h
	3PASS 600*900DPI	180m ² /h
	4PASS 600*1200DPI	120m ² /h
Max. print width	2000mm	
Max.fabric width	2020mm	
Ink type	Acid reactive, disperse ink all compatibility	
Color	CMYK, Orange, Grey, Blue, Red	
Working environment	Temperature 18~30℃, relative humidity 35~80%(non condensing)	
Overall size	4220(L) × 2040(W) × 2000(H)MM	
Package size	4320(L) × 2140(W) × 2100(H)MM	
Machine weight	1500kg	



Core Accessories



1 Bearingless Motor



2 Highly Reliable Belt Washing Mechanism



3 Independent Ink Supply Device



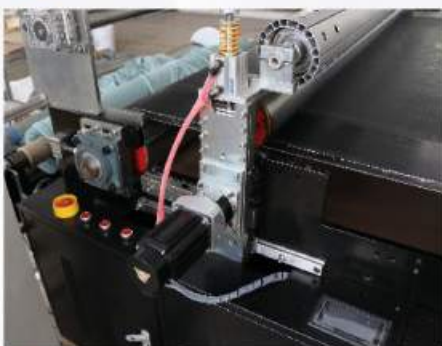
4 Circuit Control System



5 Negative Pressure System



6 High-precision guide band



7 Automatic Fabric Pushing Mechanism



8 Ink Filtration System + Peristaltic Pump



9 Ink Scraping Mechanism



Authorised Dealer
APSON TECHNOLOGIES (INDIA) PVT. LTD.

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