index

Stay Up To Speed

The rising demand for greater diversity and faster delivery, driven by the internet and smartphones, has become a major challenge for the fashion industry. Fast fashion retailers accelerated the obsolescence of trends and luxury brands responded by introducing the "See Now, Buy Now" concept. So highly informed consumers inspired by just-released collections can purchase desired items without delay through international e-commerce sites. This puts suppliers under tremendous pressure to deliver small lots at high speed.Since digital textile printers are practical solutions for swiftly producing diverse items, they are gaining much attention in the fashion industry. Unlike conventional screen printers with minimum print run requirements, they can output diverse items in small lots of any desired size.

Conventional analogue textile printing is complex and demanding. Even sample production requires the preparation of a different screen for every colour and design. But digital textile printing allows direct printing of images without screens, making it much easier to prepare samples, arrange collection items and produce small lots of diverse items. The value of versatile dyeing and other processing capabilities is gaining recognition as many brands start differentiating their products through original fabrics, high-performance fibre materials and knitted textiles.By enabling the creation of infinite patterns and colour variations in fashion collections, digital textile printers are positioned to play an increasingly vital role in the highly competitive world of fashion.

Giving Shape to Ideas

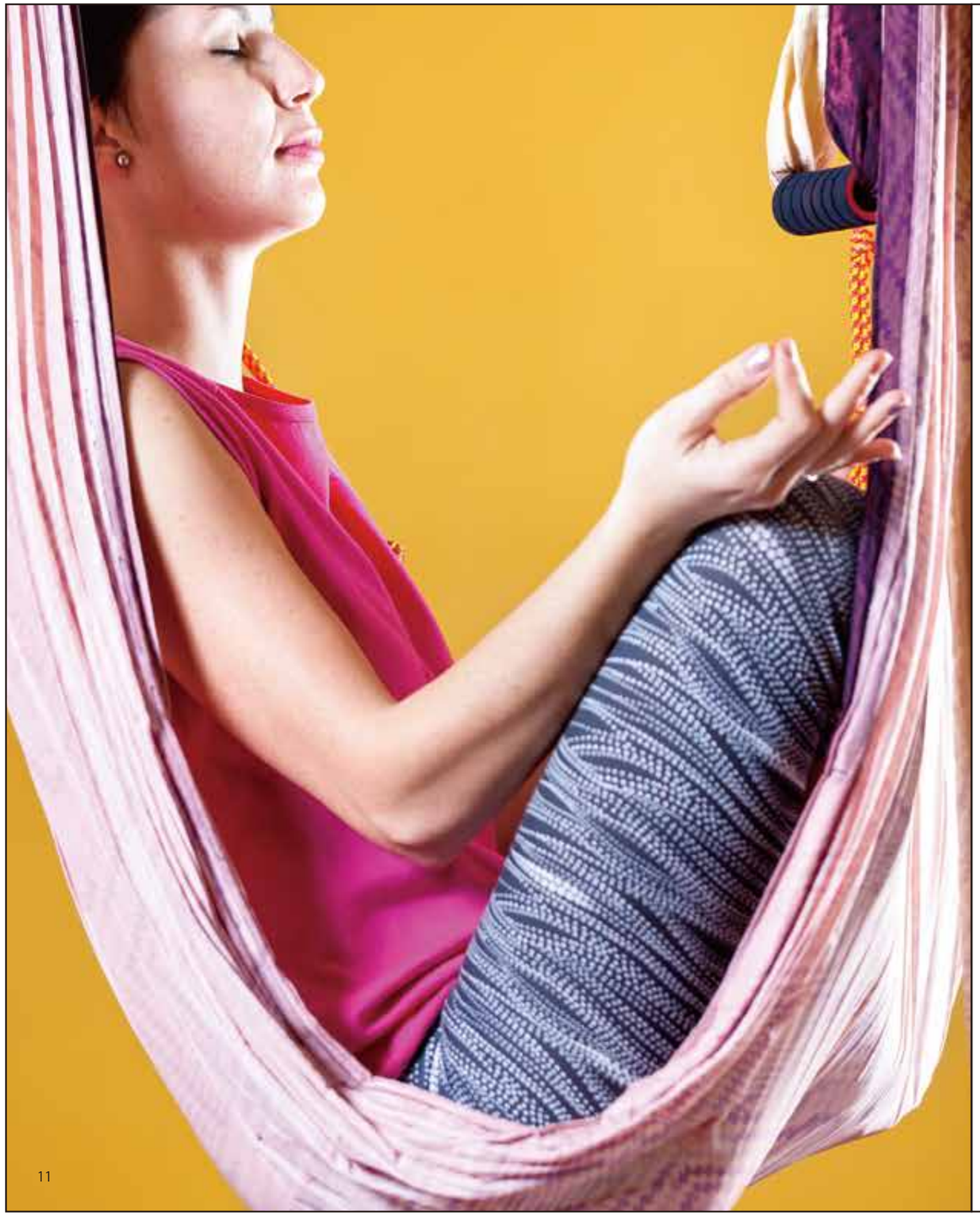
Konica Minolta digital textile printers have greatly expanded the possibilities of inkjet textile printing.Nearly 20 years after pioneering our very first model, our digital textile printers have established a presence around the world. Fashion life cycles continue to shorten, and speed to market continues to accelerate.But customers can meet market demands while fully expressing the creative intent of designers in textiles with high quality and repeatability by depending on highly stable and productive machines backed by prompt and thorough support.
Fashion business insiders, collection maisons and fast fashion experts around the world are paying attention to the company's long-cultivated inkjet printing technology, as well as our solid commitment to the environment, safety and chemical substance regulation compliance.

for

Apparel

Brighten up stretch fabrics

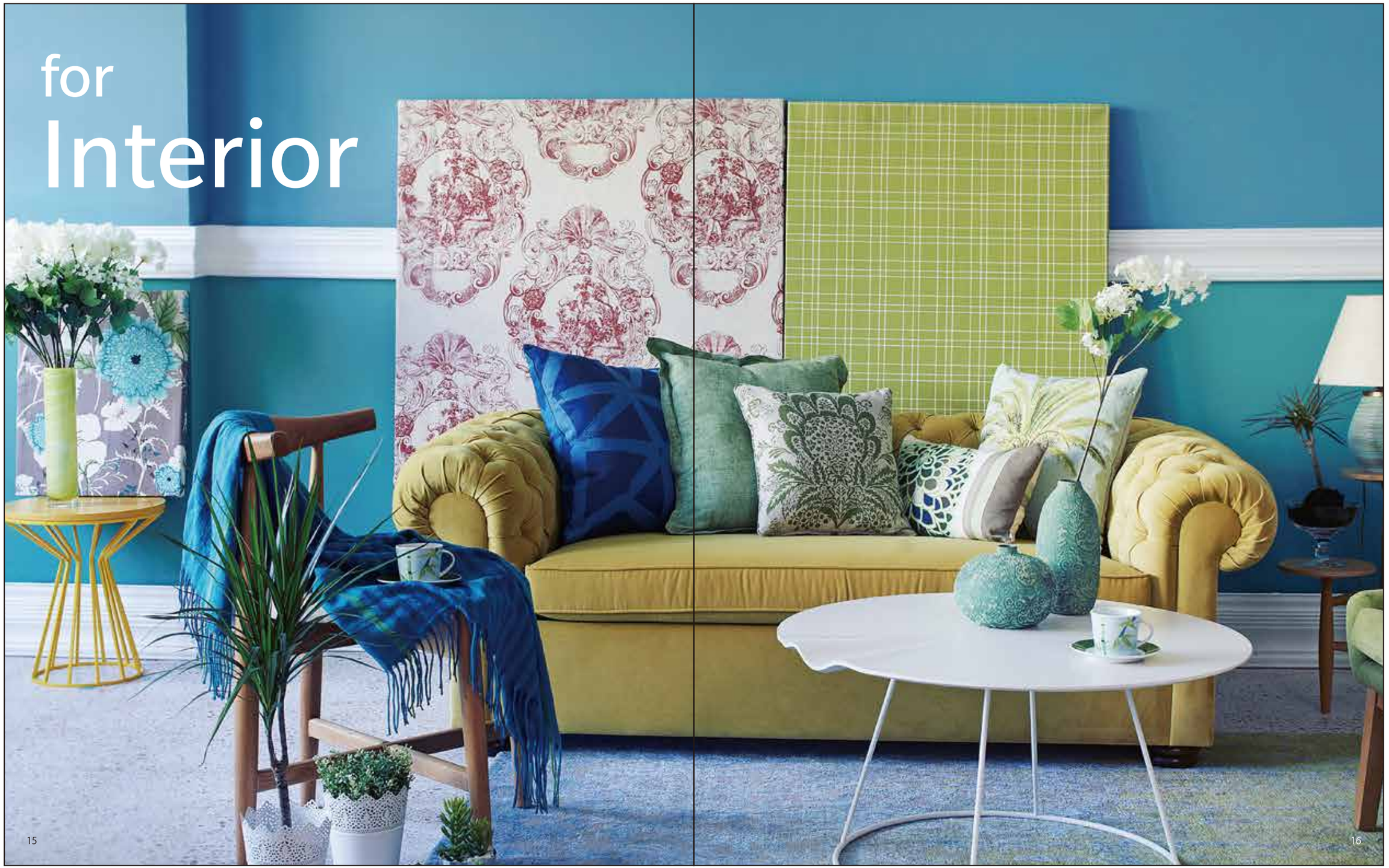
Print on chemical fiber material such as Nylon



Accent with vibrant fluorescent inks

Diversify printed shirt lineups

for Interior



Print wide with large patterns

Reproduce intricacies with clarity

Photo print in high definition on fabric

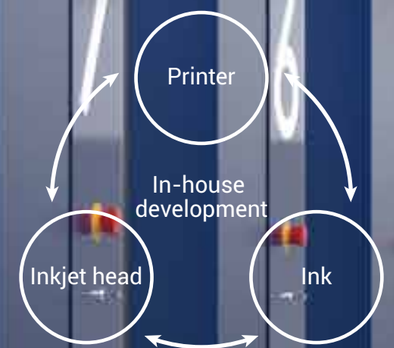
Print on brushed towel

Technology

The three core technologies of Konica Minolta digital textile printers from their earliest stages of development have been the printer, inkjet head and ink. Over the years, this trilateral approach to development has significantly advanced the products and yielded more benefits than if output quality had been the sole development focus.

Many digital textile printers integrate core technologies developed by different makers. When problems arise and support is required from more than one maker, complexities and conflicts of interest can make it difficult to determine the true source of problems. But Konica Minolta develops all three core technologies in every digital textile printer bearing its name. This not only simplifies and accelerates customer support, but improves overall performance because feedback from customers on actual usage is shared among ourselves and applied to develop and optimise components in ways not always reflected in specifications.

Open, honest communication between ourselves and with customers during the development of this trinity of technologies has earned the trust of customers worldwide and become a leading sales point of Konica Minolta digital textile printers.

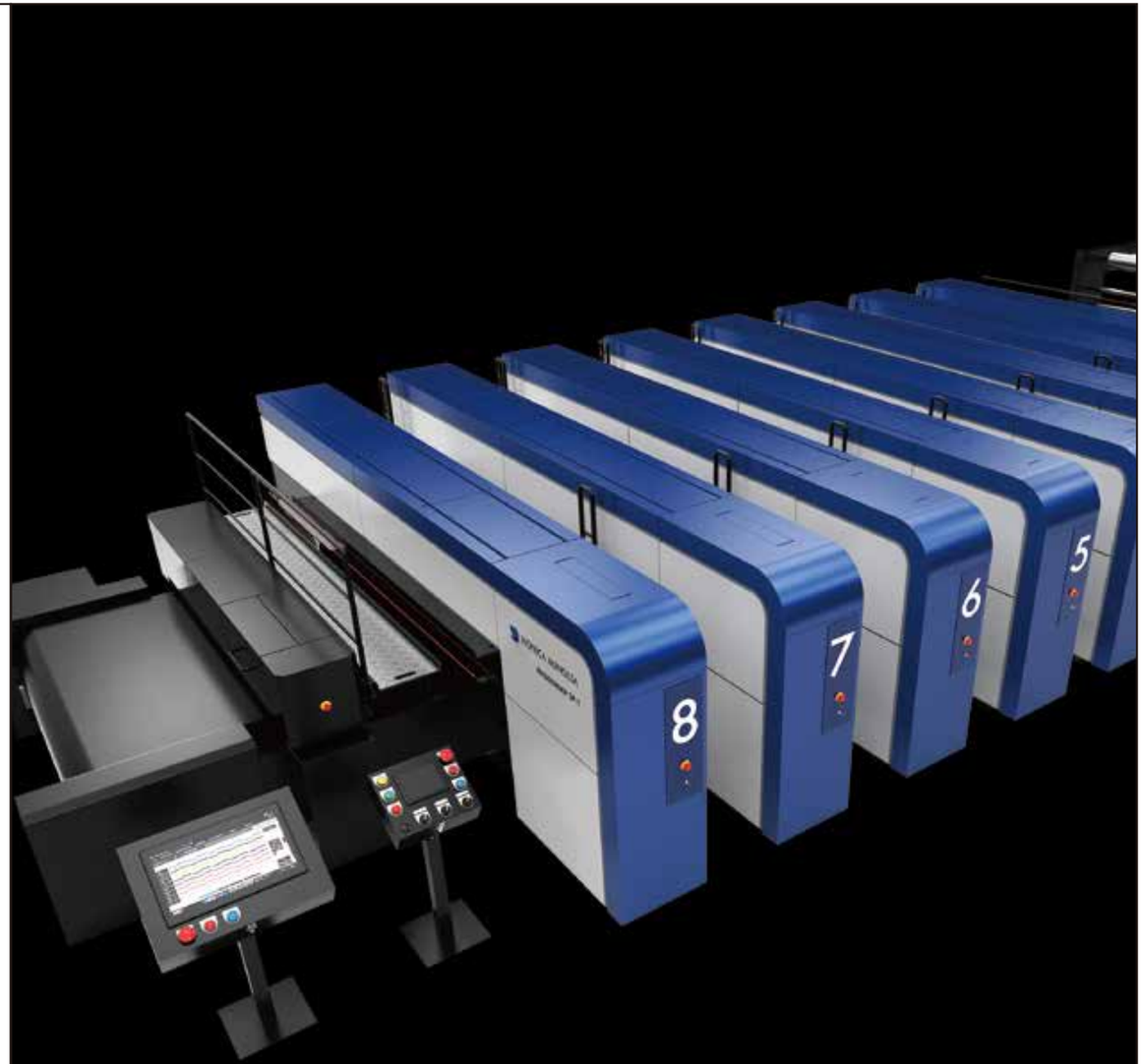


Printer

When first entering the textile printing business in the mid 1990's, Konica Minolta faced obstacles it had never dealt with before.Since every fabric varies in hardness and weave, and quality naturally varies throughout the same fabric, micron-level printing accuracy could only be achieved by slowing production down and sacrificing the digital printing advantage of short lead times. So the company partnered with experienced screen printing companies and employed trial and error to find better solutions.

In ultra-high-performance models developed to meet fast-fashion needs, cloth conveyance can reach speeds up to 67m per minute, which makes it difficult to keep the conveying amount constant. Preventing printing errors at such speeds required the development of conveyance technology that both maintains high precision and minimises the influence of external factors. The key to achieving such high levels of stability was sophisticated control over the feeding belt and inkjet head. Sensors closely monitor droplets from hundreds of thousands of nozzles to make sure none are clogged, and inkjet head positions are adjusted with micrometre precision if any inaccuracies are detected. At the same time, digital cameras and image processing technologies monitor for other anomalies, such as lifting of the fabric during conveyance, to ensure that conveyance and printing are seamlessly synchronised to deliver the core value of a digital printer.

Konica Minolta's versatile digital textile printers meet the ever-evolving needs of fast fashion. In an era when customer demands change every day, these printers guarantee high quality and reliability in the swift production of small lots for diverse product lines.



Inkjet head

Inkjet heads hold the key to achieving both accelerated output and excellent image quality. Toward realising both objectives, Konica Minolta employs shear-mode piezo inkjet heads that enable especially high-density printing, but require extremely accurate manufacturing technology. Konica Minolta chose piezo type inkjet heads because they are generally very flexible at handling various types of inks. We manufacture more than ample supplies of these high-precision inkjet heads using high-precision machining that meets the highest "Made in Japan" quality standards.

To achieve productivity rivalling screen printing machines, a single-pass printing method was adopted with inkjet heads that precisely emit microscopic droplets on belt-conveyed fabric moving below them at tremendously high speed. The heads apply ink while moving swiftly in sync with the fabric and selectively vary droplet size to suppress graininess, maintain fine detail and optimise gradation even in ultra-high-speed printing mode. Highly versatile, the heads allow use of various types of inks with diverse characteristics and boost durability through a design that prevents contact with the fabric for longer head life.

Konica Minolta employs various micron-level micro fabrication technologies to precisely manufacture nozzles and ink flow paths that optimise inkjet head ejection performance. This technology will continue to consistently produce high-quality products that satisfy the needs of demanding customers.

Ink

Colours on textiles fade and discolour during the dyeing process, as well as during use from such factors as sunlight, wind, rain, laundering, sweat, rubbing, immersion in water, chlorine bleaching, seawater and dry cleaning. Resistance to such effects is called colour fastness, and a high level of colour fastness is a prime objective when developing inks for printing. Since the dyeing mechanism differs depending on the type of textile, different dyes are typically used for different types of textiles, such as disperse dyes for polyester, reactive dyes for cotton and acid dyes for silk.

By thoroughly screening candidate dyes with organic material technology long-cultivated in its photography business, Konica Minolta developed disperse, reactive and acid dyes with excellent colour fastness for every colour in a wide gamut. When problems arose with the storage stability of a conventional disperse dye ink for inkjet textile printing on polyester, which is widely used in apparel and industrial materials, Konica Minolta selected dyes with high colour fastness to develop an appropriate disperse dye that minimises precipitation. Offering much greater storage stability than regular screen print inks, which are typically used within a few days of blending, this dye delivers all the stability required of inkjet inks.Konica Minolta also offers inks that produce fluorescent colours increasingly in demand for sports apparel, high-density black ink that achieves difficult-to-reproduce true black, and inks that enable expression beyond the range of CMYK.Expanding the choices of ink in digital printing, which specialises in rich multicolour expression of gradation, directly broadens the business potential of customers.

However, the most important thing about inkjet textile printing is the fact that the printed cloth directly touches customers' skin.For this reason, Konica Minolta conducts rigorous product assessment and various safety tests from the design and development stages to provide inks that are safe and environmentally sound.Konica Minolta strongly believes in developing inks that not only achieve clear colours and cost effectiveness, but also contribute to safe, comfortable clothing that customers can enjoy for long periods of time.

Deep involvement with customers brings us more than joy. It opens our eyes because every customer uses the machines in different ways. From installation to stable operation, the company strives to deliver new business value. This manufacturing approach includes sharing challenges closely with customers and steadily building trusting relationships.

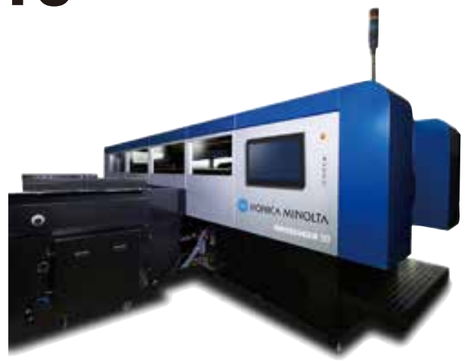
Another vital aspect of our approach to manufacturing is genuine concern for the global environment. Through on-demand production that uses only as much ink and cloth as necessary, digital textile printers reduce waste and help conserve resources. In comparison with traditional screen printers, they use far less liquid adhesive and water, and this helps lower environmental impact. By saving energy, cutting water usage and reducing liquid waste, these machines not only meet increasingly strict environmental regulations, but and contribute to society. in a world where consumption is rising. Konica Minolta solutions are supporting customers' CSR efforts and playing a vital role in the future of the industry.

Series Introduction

NASSENGER SP-1

Product Name	NASSENGER SP-1	
Technology	Drop on-demand piezo inkjet technology	
Printhead	KM water based inkjet printhead module Colors 4～8 colors Number of modules 96～216 modules	
Ink	Reactive dye ink [Yellow,ExtraMagenta,Cyan,Black,Orange,Blue,Pink,Gray,Sky]	
	Disperse dye ink [Yellow,Magenta,Cyan,Black,Light Magenta,Light Cyan,Light Black,Red,Violet]	
Printing Width	1,600～1,830mm	
Printing Mode	Ultra High Speed	720×360/6,400㎡/h
	High Speed	720×540 /4,300㎡/h
	Standard	720×720/3,200㎡/h
	High density	720×900/2,500㎡/h
Dimensions (L × W × H)	L 16,150 × W 5,435 × H 2,540（mm）	
Weight	Print Unit	Approx. 820kg × number of colors

NASSENGER 10



Product Name	NASSENGER 10	
Technology	Drop on-demand piezo inkjet technology	
Printhead	1024 nozzles water-based inkjet printhead x 8colors72pcs (max. 9colors81pcs)	
Ink	Reactive dye ink TYPE-P [Yellow,ExtraMagenta,Cyan,Black,Orange,Blue,Pink,Gray,Sky]	
	Disperse dye ink TYPE-S [Yellow,Magenta,Cyan,Black,Pink,Sky,Gray,Red,Violet]	
	Acid dye ink [Yellow,Magenta,Cyan,Black,Blue,Light Magenta,Orange,Light Cyan,Light Black]	
Printing Width	1,850mm	
Maximum Fabric Thickness	8mm	
Printing Mode	Draft	370～990㎡/h (with 8 colors)/360～980㎡/h (with 9 colors)
	Standard1	310～580㎡/h (with 8 colors) /300～570㎡/h (with 9 colors)
	Standard2	140～450㎡/h (with 8 colors) /140～440㎡/h (with 9 colors)
	Standard3	120～230㎡/h (with 8 colors) /120～230㎡/h (with 9 colors)
	Extra1	70～230㎡/h (with 8 colors) /70～230㎡/h (with 9 colors)
	Extra2	60～120㎡/h (with 8 colors) /60～120㎡/h (with 9 colors)
Dimensions (W × D × H)	Scan Unit	W 5,800 × D 2,020 × H 1,860（mm）
	Trasport Unit	W 2,600 × D 4,360 × H 1,140（mm）
	Belt cleaning Unit	W 2,360 × D 783 × H 662（mm）
Weight	Scan Unit	Approx. 1,800kg
	Trasport Unit	Approx. 2,100kg
	Belt cleaning Unit	Approx. 300kg

NASSENGER 8

Product Name	NASSENGER 8	
Technology	Drop on-demand piezo inkjet technology	
Printhead	1024 nozzles water-based inkjet printhead 4 line head x 32pcs (max. 36pcs)～2 line head x 16pcs (max. 18pcs)	
Ink	Reactive dye ink TYPE-P [Yellow,ExtraMagenta,Cyan,Black,Orange,Blue,Pink,Gray,Sky]	
	Disperse dye ink TYPE-S [Yellow,Magenta,Cyan,Black,Pink,Sky,Gray,Red,Violet]	
	Acid dye ink [Yellow,Magenta,Cyan,Black,Blue,Light Magenta,Orange,Light Cyan,Light Black]	
Printing Width	1,850mm	
Maximum Fabric Thickness	15mm	
Printing Mode	Draft	170～380㎡/h (4line head)/90～240㎡/h (2line head)
	Standard1	130～240㎡/h (4line head) /70～130㎡/h (2line head)
	Standard2	70～200㎡/h (4line head)/40～110㎡/h (2line head)
	Standard3	60～110㎡/h (4line head)/30～60㎡/h (2line head)
	Extra1	40～110㎡/h (4line head) /20～60㎡/h (2line head)
	Extra2	30～60㎡/h (4line head) /15～30㎡/h (2line head)
Dimensions (W × D × H)	Print Unit	W 5,080 × D 2,010 × H 2,040（mm）
	Inkrack	W 960 × D 1,965 × H 762（mm）
	Unwinder	W 2,544 × D 800 × H 1,150（mm）
	Drier&Winder	W 2,534 × D 1,668 × H 1,480（mm）
Weight	Print Unit	Approx. 3,300kg
	Inkrack	Approx. 170kg
	Unwinder	Approx. 600kg
	Drier&Winder	Approx. 270kg

Textile Business Promotion Division
Industrial Print Business Unit

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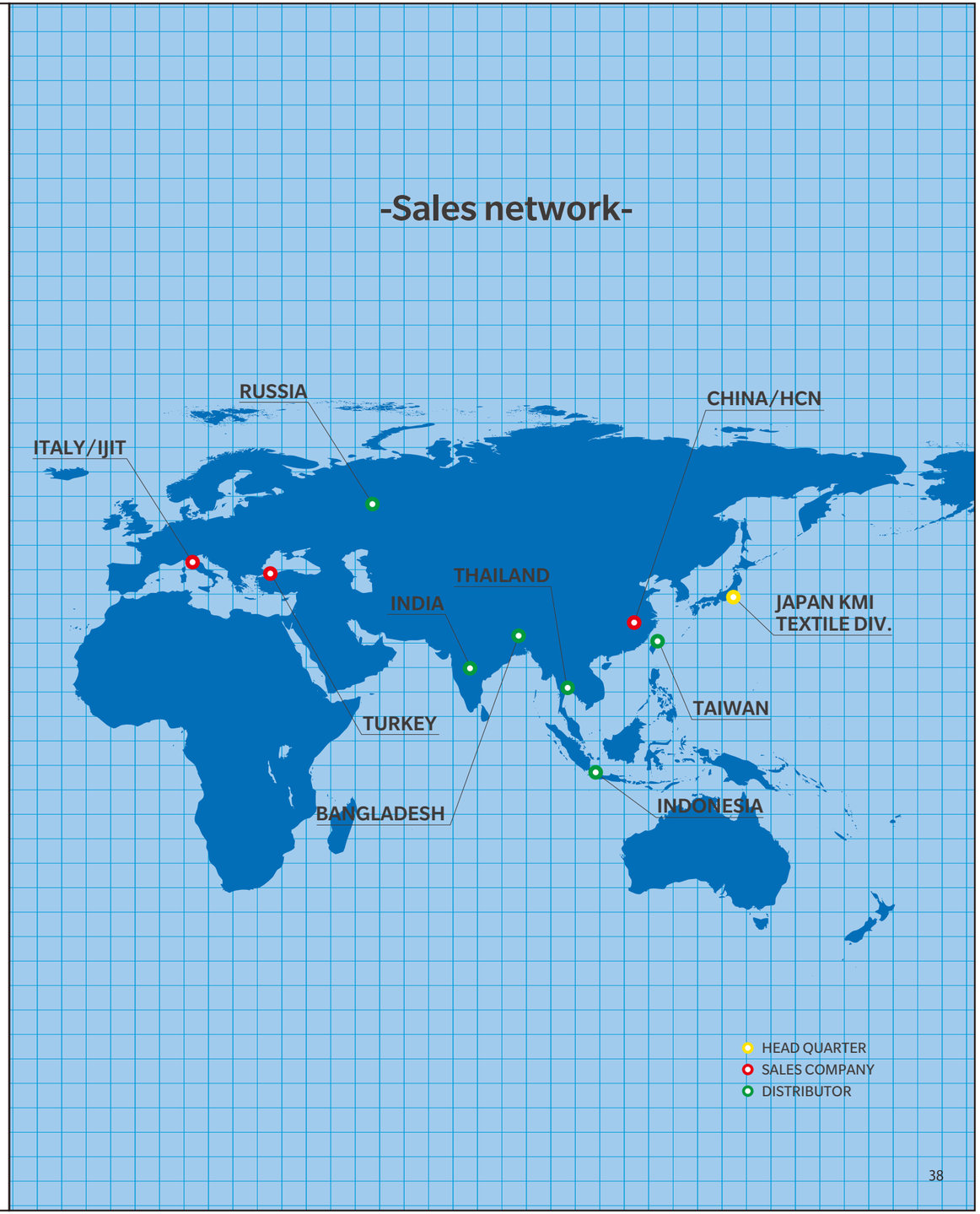

KONICA MINOLTA UNDERSTANDS COMPANIES

Ilay Tekstil

We checked all the possibilities from market that we can make our dreams to come true. And after checked every points of buying reasons, we decided to buy Konica Minolta SP-1

Factory Manager
Mr. Fikri Savas

- Established in 1973 in Bursa, the largest textile area in Turkey.
- Introduced mass-production type Inkjet textile printer for the first time in Bursa area,400 employees.
- Production volume entering five fingers in Turkey.
- Dying and printing mainly for apparel, its 85% is for EU.
- Mr. Ali Ay, the owner, is the chairman of the Turkish football team BURSASPOR.
- Factory manager Mr. Fikri is familiar with Inkjet textile printing, and he is famous and influential in textile industry of Turkey.

Teintures et Impressions de Lyon

The most important to me is the total control by manufacturer of the combination of all components: heads, inks, machine and color management. Konica Minolta responds to this need.

Managing Director
Mr. Jean Michel Bertrand

-One of the biggest printing company in France
-Most historical printing company in France
-Pioneers in use of Inkjet Technology
-Strongly believe in digitalization of textile
-Print for domestic market and export all EU countries

SATINSKIN TÊXTEIS SA

What led us to Konica Minolta was essentially the tests we carried out. The equipment, in fact, seemed to us to be better-quality equipment in terms of print quality, ease of operation, and the fact that we were dealing with a single manufacturer, a single contact.

CEO
Mr. Carlos Costa

-Established in 2011 in Braga, Portugal and production started at the end of 2012 only with Inkjet textile printing.
-A company that first introduced SP-1 in the world in 2016.
-Main market is for fashion, decoration and home textile.
-Have clients in many areas, from large-scale distribution to big brands.