



Year 17 • issue 2

The twilled coolness of Denim

Soft cushions, tough regulations for textile

The value chain of Digital Textile Printing

How does the H&M brand approach sustainability?

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Exchanging clothes.

Burning is not a solution

By **Ton Rombout**

The French government recently banned premium fashion brands such as Burberry from burning unsold stock, a method used to limit the number of reduced price garments of their brand on the market, thus forcing people to buy new. In fact these companies would prefer their fashions never to be sold at a discount in order to keep them both exclusive and expensive. In 2017 Burberry set fire to unsold own brand stock to the value of 30 million euro. And there are many more examples of other fashion houses that burn or burned their old stock.

During my research for articles on textile printing, textile printing manufacturers and their products, and the business of manufacturing textile products such as clothing, jackets, wall decoration, cushions, curtains, etc. I also came across a lot of information on sustainability and recycling. Overproduction of clothing is quite common, especially since 'fast fashion' was introduced several years ago.

At Easter, when my family gets together for a family dinner, it is traditional for my wife, my three daughters and my wife's sister to take big bags of clothes. They are stacked together and

then everyone can pick what they like and might want to wear later in the year. It's quite funny to watch everyone trying on clothes and leaving with 'new' clothes that are in fact not new at all.

Recycling is one way to reduce the clothes mountain we produce across the globe each year, but that's still not enough. Other solutions are necessary to monitor overproduction. "We need far less than we buy," explains Ashna Chhatta in a Dutch newspaper article. "In a society where everything has to be cheaper and available ever more quickly, the fashion industry is one of the main culprits when it comes to environmental damage and human rights."

Global production of clothes has doubled over the past sixteen years. Factory workers' salaries are well below standard and thousands of litres of water are required to create just one pair of jeans. There are initiatives that try to do something about it, such as the Cosh conscious shopping app, H&M introducing a scanner that provides information on how products are made and we should also not forget the global Fashion Revolution Week movement.

This issue aims to provide more information on how printing companies, brand owners and printing and other equipment used to manufacture clothes and other textile products, are focused on sustainability and fair remuneration for workers in the textile markets across the world.

We look forward to seeing you at ITMA in Barcelona.

Ton Rombout, Editor-in-Chief
SignPro Europe
www.signpro-europe.com



Intro

SignPro Europe June 2019

Content

- 03 Intro
- 06 Journal
- 08 The value chain of Digital Textile Printing
- 12 Soft cushions, tough regulations
- 16 The twilled coolness of Denim
- 18 India based Bliss Impex invests in four Durst Alpha systems
- 20 New extra wide Stitch S1000
- 22 SPGPrints at ITMA Barcelona
- 24 EFI Reggiani BOLT at ITMA
- 27 TTS to offer broad spectrum at ITMA
- 28 Cuthings offers milling and cutting services to third parties
- 30 Kornit Digital to show new direct-to-garment printing systems and to launch their latest roll-to-roll innovation!
- 32 Direct, Sublimation, Transfer
- 36 Durst launches new P5 printing systems
- 38 A bright future ahead for Promic
- 40 Know-how and experience make all the difference
- 42 TreeToTextile with H&M and Inter IKEA groups
- 44 How does the H&M brand approach sustainability?
- 46 Esko launches Motorized Roll Feeder
- 48 Digital Signage for Outdoor on the move
- 50 AGILA – the latest compact and creative cutting plotter
- 51 Caldera announces new Customer Success Plan
- 52 T-shirt recycling is here and it could transform fashion
- 54 Mimaki shows latest textile technology at ITMA



Cover photo:
Ian Berry at work with DENIM
- photo Exposure Photography

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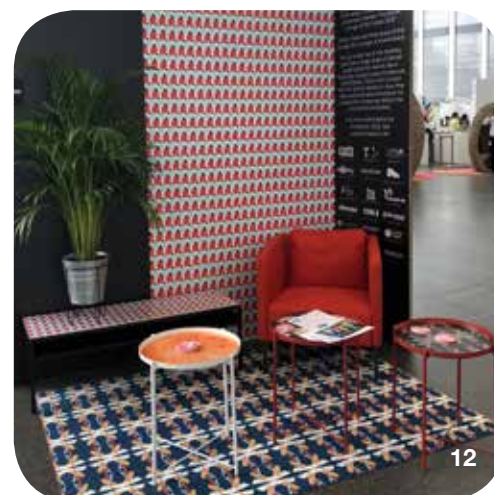
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8



12



22

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40



44

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Zünd Coated bits improve routing efficiency

Zünd is bringing to market new, DLC-coated router bits. The coating reduces friction and increases wear resistance, thereby delivering very high-quality results as well as better performance and cost efficiency. The new router bits are especially beneficial in routing applications involving aluminium, aluminium composites, wood, and PVC. Friction and wear during the routing process substantially affect the quality of cut parts, routing performance, and longevity of bits. Thin-film coatings are among the most effective ways to achieve significant improvements in performance and productivity. Innovative DLC (diamond-like carbon) coating permits greater processing speeds and cutting depths. The number of passes can be reduced, which significantly increases routing productivity. Up to 4 mm thick aluminium composites can be processed in a single pass, at speeds of up to 11 m/36 ft per min. In many cases, a finishing pass becomes unnecessary, which further reduces production time. More info: www.zund.com



New owner of Promic Display Systems

Promic Display Systems has been acquired by Sign-Zone LLC. This means that from now on, Promic B.V. is part of the Sign-Zone Group. Over the last years, Promic achieved great and continuous growth, and the company will certainly continue growing with this partnership with Sign-Zone. Promic is very delighted and proud to be part of the Sign-Zone Group, and the opportunities this creates will significantly reinforce the ability to supply Mobile Display Systems. Sign-Zone is a leading display manufacturer in the North American market and serves its customers under several brand names, among which Jansen Displays and now also Promic B.V. in the European market. This new combination will be the number-one supplier of Mobile Display Systems to the Print & Sign Industry. More info: www.signzoneinc.com and www.promic.com



FESPA returns to Munich for FESPA Global Print Expo 2021

FESPA recently announced that Global Print Expo will return to Munich, Germany in 2021, together with its co-located event for non-printed signage, European Sign Expo. The events will run for four days, from 18 to 21 May 2021. This will be the event's sixth return to the Bavarian capital. The 2020 Global Print Expo will take place in Madrid, Spain, from 24 to 27 March 2020 at the IFEMA exhibition centre. European Sign Expo and the recently announced Sportswear Pro event, will run alongside the main Global Print Expo. More info: www.fespa2020.com

FESPA comes with new sportswear pro event

FESPA is proud to announce the expansion of its textile portfolio with the launch of Sportswear Pro, a new exhibition dedicated exclusively to sportswear manufacturing. The first event will run alongside the flagship FESPA Global Print Expo 2020, from 24 to 27 March at IFEMA, Madrid, Spain. With a focus on the latest technologies in on-demand and customised sportswear production, Sportswear Pro will bring together suppliers of solutions for three key areas of sportswear manufacture: design (CAD/CAM and 3D body scanning); production (CMT ['cut, make and trim'], bonding and knitting) and decoration (printing, engraving, embroidery and laser appliqué systems), as well as developers of accessories, smart textiles and printed electronics. Visitors to Sportswear Pro will be business decision-makers seeking the latest technological innovations as a means to streamline production processes, reduce inventory and waste, and enable on-demand and just-in-time production in response to shortening fashion cycles. More info: For more information on Sportswear Pro 2020 visit www.sportswearpro.com



Béflex adopts EFI End-to-End Ecosystem

Béflex, a Point of Communication print expert company, will streamline its operations while strengthening business management capabilities in digital inkjet display graphics production with the purchase of an EFI Midmarket Print Productivity Suite, which features at its core EFI Pace ERP software. Béflex is one of Europe's most progressive users of advanced EFI super wide-format printing technologies, and was one of the first businesses worldwide to run EFI's latest-generation VUTEK roll-to-roll and VUTEK h series hybrid LED super wide-format inkjet printers. The suite will integrate with Béflex's super wide-format printers and the EFI Fiery digital front ends (DFEs) used to drive the printers, creating a highly automated, streamlined, and data-driven business and production management workflow. Image From left to right: Adrian Zesinger, EFI EPS Western Sales Director, Béflex CEO Lászlo Bárán, EFI EPS Dach Sales Development Manager Stephan Stark More info: www.efi.com



UK Corrugated Manufacturer purchases EFI Nozomi Press

Durham Box, a UK-based corrugated packaging manufacturer has purchased an EFI Nozomi C18000 single-pass, ultra-high-speed LED inkjet corrugated packaging press from EFI. Durham Box made the investment to optimise its production process and provide superior-quality imagery for customers. Durham Box is one of the UK's leading manufacturers of corrugated packaging, servicing large scale accounts across multiple markets, particularly within the fast-moving commercial goods (FMCG) sector. The company offers years of experience within the sector with a depth of knowledge to ensure that all packaging projects are successful. Today, Durham Box occupies a 10,220 square metre (110,000 square foot) factory and employs more than 75 people making in excess of 35 million products per year. Durham Box's new ultra-high-speed Nozomi inkjet press is part of a complete ecosystem for corrugated production available from EFI, with leading edge inks, EFI Fiery digital front end technology and an EFI Corrugated Packaging Suite manufacturing execution system workflow. More info: www.efi.com

Durst opens new headquarters and Customer Experience Center

Durst has opened a futuristic new headquarters and Customer Experience Center in Brixen, northern Italy, that represents a watershed in its transformation into a highly integrated process service provider. In future, Durst will invite more of its international customers to the Customer Experience Center in the 5,700 square meter headquarters that embodies the transformation into a highly specialized, high-tech business. The integrated concept has been incorporated into the architecture of the building as it connects a new administrative block with production facilities. The iconic design for a company building with a tower was first presented more than 50 years ago, but never realized. Architects Monovolume pursued the original concept and designed a flat, floating 'wing' with a six-storey tower. The powder-coated metal façade has 850 multi-coloured, luminous window elevations arranged in pixel-like fashion. The pixelated facade of Durst's new headquarters is also a pointer to the company's areas of business, as Durst is a global leader in high-performance printing systems – from image data processing and printing to final product finishing – all from a single source. More info: www.durst-group.com



A myriad of technologies

The value chain of Digital Textile Printing

By **Ton Rombout**



Slufter-Textel on canvas by DrukwerkDeal-243bx120h-cm, picture Ton Rombout.

Various machine manufacturers in the large format inkjet market are now focusing on digital textile printing. They have developed, or adapted, printers to print on one or more types of textile. Other manufacturers are about to do the same, or participate in one of the pioneers in this field, who often made the switch from screen printing.

However, what does the value chain of textile printing look like, in screen printing or with the help of digital printing? And when will high volume and low volume digital textile printing meet? First of all, let's look at what's happening in the high volume textile printing market for fashion items such as clothes, curtains, furniture and many other products.

Traditional value chain

The traditional value chain of textile printing, mostly using - rotary - screen printing, relates to two types of printing companies: Commission printers, who work on behalf of other companies delivering the basic designs, e.g. for exhibitions or other designers, Collection printers, who print for their own brand and/or shops, mostly with assistance from their in-house design department. Obviously there were, and are, printers doing both. In fact, the arrival of fast digital textile printers resulted in 'fast fashion' from commission printers (catalysed by the Zara brand in particular) entering the market. These printers started to buy, and use, digital textile printers enabling them to produce clothes and other

fashion items in much shorter time cycles and much smaller numbers than with screen printing. These systems usually print using reactive or disperse inks, depending on the type of fabric. Printing is then followed by steaming and washing. Steaming to make the print resistant to subsequently being washed, and washing to eliminate any colour particles that were not 100% fixated. These processes are followed by the finishing stage, using special machines to adapt the printed material to a specific width or weight, depending on the type of clothing. A water resistant finish can be applied to sportswear, whilst an extra 'softener' is often applied to lingerie.



High quality textile print provided by EFI Reggiani.

Complete rolls

The completed rolls are then ready for delivery to the clothing workshop. With commission printers this often involves an external company, with collection printers it is usually their own department. The rolls are then cut into patterns in confection departments. Nowadays this is mostly done by machines (from Gerber, Lectra, Zünd etc.) in high volumes, a process in which the nesting of the patterns is done by computer. Esko has recently equipped its cutting tables with a weighted roll feeder and catch, making it possible to cut large rolls of textile with a knife. Laser cutting system builder Trotec – similar to many others in finishing - is now entering the textile market with laser cutting. Some systems will make it possible to cut many layers of fabric on a table mechanically. These machines are fully programmable and will cut different designs in the desired numbers and sizes. A company such as Zara, with numerous shops all over the world, assesses weekly which sizes of a certain design have been sold and sends this data back to the manufacturer.

In the final stage the designs are delivered to a sewing workshop, which adds regulatory and design labels, packs the clothing and sends it to the brand's distribution centre. Because this method assumes that the distribution centre is closer to the final phase - in this case the stores - the Zara distribution centre, for example, is located in Morocco rather than Sri Lanka.

This type of value chain applies to manufacturers of large digital textile printing systems such as SPGPrints, EFI Reggiani and MS Solutions, to name but a few (although there



H&M-sustainable textile.

aren't in fact that many). For now, these companies maintain that they have few problems with other digital textile printing system builders, who focus on printing much smaller runs at slower speeds and are often not familiar with how the value chain of digital high volume textile prints in smaller runs (very quickly) builds up.

Part 2 - Smaller digital textile printers

The value chain of the different kinds of textile printers we encounter nowadays at fairs such as FESPA.

One thing is clear: digital printing of textiles is a hot topic. Sales of digitally printed textiles are

on the up, but this growth is not the same in every segment within the textile market and also differs per region. Textile fabrics for various advertising applications can also be printed with UV or latex inks, which means that the number of suppliers and, therefore, the competition is considerable. As a result the volume in this segment is growing faster than the turnover. In order to be successful, those getting started with textiles from the graphic or sign market initially need to focus on finishing (see above). Textile assembly differs from all other forms of finishing in the graphic and sign market. The only form of textile printing this does not apply to is printing on already made-up textiles, such as T-shirts, polo shirts or bags, using a Direct-to-Garment (DtG) printer. Kornit Digital and many other brands manufacture these types of printers.

Inks and textiles

Textiles may consist of natural fibres (cotton, linen, silk), semi-synthetic viscose (rayon), or plastic (polyester) and - in the advertising market – polyester reinforced PVC. Each application imposes its own requirements on the textile and the printing thereof. Traditionally, the different types of ink used to print the textiles are geared to the type of fibre (for a detailed description of the textiles and the best inks for printing, please refer to my article in SignPro Europe number 1-2019, page 48-49). This is also the case with digital inks. There are roughly four (or five) groups of inks: Sublimation inks, for textiles with at least 50%

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Textile

SignPro Europe June 2019



Examples of digital textile prints provided by SPGPrints.

polyester fibres, which are particularly suitable for advertising applications. Acid inks are used for printing on wool, silk and viscose. Reactive dye inks are particularly suitable for printing on vegetable fabrics such as cellulose, cotton and linen. Similar to sublimation inks, heat promotes the release of the colours in the dye and the bonding of the dye to the fabric. Disperse inks are being used for some special vegetable fabrics. Pigment inks are the big promise in digitally printed textile, not so much in the very fast segment of SPGPrints and others mentioned but in the small and middle segment. They can be used on a large number of fabrics but usually require pre-treatment to ensure proper adhesion of the pigment ink.

Pre and post processing

The traditional market for printed textiles also involves pre and after treatment of the textile. This determines the printability, as well as other properties such as dirt repellence, fire and water resistance. Traditional screen printers often have a so-called tension frame for this, to pre or post process the textile. A lot of textile is also washed after printing, or steamed, ironed and dried. In the first digital textile applications, we saw

little in the way of extra equipment from the traditional market. Printing on polyester flag cloth requires relatively few extra operations. Fixing the ink in the fibres using heat and pressure is the main finish here. Various suppliers now provide tailor made solutions for textile pre-treatment and post processing.

DtG printers

The growth in printing on textiles in this smaller segment is mainly generated by DtG printers. Here the growing influence of web shops is asserting itself. They are now good for large numbers, but the number of items with the same print is small. There is also a growing need among retailers for small series of customized clothing, used to attract visitors to the store.

Conclusions and recommendations for smaller digital textile printing systems
Formulate a clear plan before purchasing a printer. Work out the entire production chain you want to follow, including all the different links and steps involved. Remember to formulate a comprehensive business plan: What do you want to produce? For whom do you want to work? What does that market look like? Who are your competitors? What are the prices? What's the ROI?

All these questions require accurate answers before you purchase a digital textile printer. Also look at sustainability aspects if your potential textile buyers have to comply with regulations, something that will become more and more important going forward....



Example of latex prints made by HP.



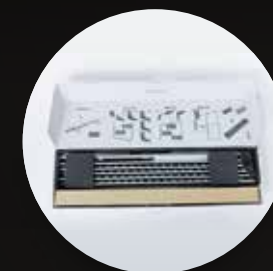
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Soft cushions, tough regulations

By Sonja Angerer



Printing on synthetic leather with Stahl and HP.

Trade fair models and retail business

It is important to recognise many of the applications shown at trade fairs for what they really are: business ideas, not fully developed products. Many things that work well at trade fairs or as a decoration for shop windows may only last for a few days and can prove to be unsuitable or impractical in everyday use, e.g. fading textiles or glass decorations that become damaged by household cleaners are not particularly well received by consumers. Tableware and cutlery decorated using sublimation printing, which can only be hand washed with care, are other quite common examples of products that customers will not be satisfied with. When digitally printed products are sold to end consumers the Print Service Providers (PSPs) in question become manufacturers of industrial goods from a legal point of view.

From printer to manufacturer

This new status changes a lot for Print Service Providers. Unlike with B2B business, end

Curtains, runners, cushions, wallpapers - digital printing is ideal for small scale production and personalised items used to create a beautiful home. However, producers need to ensure that they are au fait with relevant legislation.

A tiger print piano, a ski featuring a photograph of the kids, a blanket decorated with unique designs, cushions in customisable styles, etc. Printed interior decoration and personalized items are now real crowd-pullers at trade fairs. Not surprisingly, as many digital printers already work with machines that are capable of producing these kinds of products and there definitely is no shortage of ideas and designs in creative business areas such as digital printing and advertising technology. Webshops can be set up at little cost, whilst the internet makes it possible to develop global sales channels, even for niche products. What could be more logical than making the change from printer to manufacturer?



Kitchen equipment for signing.



Wall and floor coverings.

customers, for example in Germany, are often entitled to a 24 month warranty. During the first 6 months any fault is presumed to be caused by manufacturing defects. For example, if a product fades or shows signs of excessive wear the customer has the right to complain. Legally, the manufacturer can make up to three attempts to repair the product before the customer is entitled to withdraw from the contract, meaning that they must be refunded. If the product is distributed via channels such as gift wholesalers or local furniture stores, the retailer is the first point of contact for the end customer. However, the retailer can - and probably will - eventually turn to the manufacturer.

Licenses and registering

Packaging also requires specific consideration when it comes to selling to end consumers. As of 1 January 2019 suppliers of packaged goods for end consumer use have to register their brands with the ZSVR (Central Packaging Register Agency) in Germany. They also have to purchase a license from a 'Duales System Deutschland' (Green Dot) provider. This law, which aims to finance the recycling of packaging waste, was conceived with the multinational consumer brand industry in mind. There are no exceptions for small businesses, as the provisions also apply to small scale consumer goods production, e.g. personalised printed mugs in a cardboard box.

Product safety and consumer rights

Many wallpaper printers still recall the infamous German "Ü-Zeichen" (conformity mark) introduced five years ago. Even though it was

eventually overruled by EU legislation, it became clear how ill-prepared many PSPs were when venturing into wallpaper printing. In addition to the Ü-Zeichen, then and now, wallpapers are also subject to the requirements of the harmonised Construction Products Directive (89/106/EWG) and CE mark. Other relevant standards include EN 233 (ready-to-apply paper, vinyl and plastic wall coverings) and EN 234 (wall coverings for subsequent treatment), which address issues such as

light-fastness and wash-resistance. These regulations still apply today, some times in conjunction with the national regulations of the relevant member countries.

Furniture and furnishing fabrics

Obviously a wide range of standards, provisions and certificates apply to furniture and furnishing fabrics also. Those most commonly used ones are DIN EN 14465:2006 (furnishing fabrics for living spaces) and Oeko-Tex. TÜV Süd also offers furniture and mattress testing

with respect to the use of restricted substances (RSL) and compliance with REACH and RoHS2.

Mechanics, construction and component testing is also available. Not all tests are compulsory. Well-known certification such as TÜV Süd's GS ("Geprüfte Sicherheit" / Tested Safety) is not necessarily just an international selling argument; it can also offer a certain level of protection against complaints or even legal claims for damages. However, it is important to be aware of the official scope of application, i.e. European authorities are not obliged to recognise US certification, particularly when awarded by private parties, and vice versa.

Semi-finished products

Particularly when using a sublimation printing process to decorate products, digital print service providers tend to purchase semi-finished products such as primed cups, cushion covers or plates from their suppliers. In such cases it may be worth enquiring about commonly used certificates such as REACH or Oeko-Tex well in advance, although ultimately the finished printed product, which also needs to be certified, will be the deciding factor. As a general rule the use of certified inks to create the print does not automatically mean that the finished product can be labelled with the certification. In fact the PSP is often considered the legal distributor, who is liable. In the event of claims they can of course turn to their supply chain if problems occur. It is important to keep in mind though that taking legal action against a foreign

Read more -->>



Lamps and flame retardant properties.

company can be very time consuming and costly for small to medium-sized businesses.

The ultimate test: fire safety

With large projects involving digitally printed interior decorations fire safety is often critical. This may be due to the fact that in Germany a 'B1' fire rating is generally required in areas that are accessible to the public, which may also include hotel or office lobbies and/or toilets. The German B1 standard is regulated by DIN 4102 for flame-retardant building materials. It also incorporates other building material classes such as A1 and A2 (non-flammable). Floor coverings and curtains, for example, which also feature amongst the building products, are subject to this regulation as well. Numerous other fire protection regulations apply throughout Europe, including the well-known French M1 standard, which remains in force for the time being. However, the EN 13501 Europe wide classification system has been applied alongside national standards since 2002. The specifications for the B1 and EN 13501 tests are somewhat different, as both standards require a preliminary examination. Only when this has been passed can the product be tested specifically for the desired certification. If the requirements are not complied with but a certificate with less stringent requirements can be obtained, the entire process must be repeated under the conditions associated with

the other certification that is now being applied for. Typically, the cost of certification at an accredited laboratory starts around 2,000 euro. DIN 4102 requires regular re-evaluations, as the validity of classification reports on fire class ratings is limited to a 5 year period. There is no mandatory validity period for EN 13501.

Conclusion

FESPA identified the production of printed interior decorations as a promising high growth segment in its Print Census market research, which was released in May 2018. For digital printers it is a relatively easy way to expand their product range, providing the bottlenecks associated with further processing can be overcome. Distribution, packaging and logistics will also require investment. And a clear distinction should be made between premium and personalised products and (relatively cheap) photo gifts. This can be achieved, for example, through branding or even professional design. In both retail and project businesses, certificates and tests to comply with relevant DIN/EN standards could become even more important going forward. PSPs should not ignore these legal requirements, because as manufacturers they may find themselves exposed to unlimited liability risks.

Note: At the Heimtextil Frankfurt trade show in January 2019, HP showcased a solution to print on synthetic leather using HP Latex inks

(see picture). Back in August 2018, HP and Stahl, a leader in surface treatment and coating solutions for flexible materials, already announced a partnership focused on enhancing the durability of printed synthetics. Stahl claims that its 100% water based Stahl EVO range is the next generation of polyurethane coatings for synthetics, which does not contain any hazardous classified substances. •



Non toxic ink regulations.



Certifications for ink used on instruments for food use.



SPGPrints introduced the groundbreaking rotary screen printing machine (RD 1), together with the world's first seamless rotary screen at ITMA 1963 - Hannover.

SPGPrints knows the way, goes the way and shows the way.

Over the years, we have been the inventor of both rotary screen printing as well as digital textile printing. Our continuous product innovation has brought us over 300 patents and enabled us to rapidly redefine the textile printing landscape.

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We use our knowledge and experience to help our customers find the most suitable printing solution and optimize both their conventional as well as their digital textile printing process. Due to our understanding of local market needs, we're able to give specialized advice and go on long-term journeys with our customers. Together we strive to deliver a portfolio of machines, inks and screens to help you grow your business and set industry standards. Are you ready to go on that journey with us?



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Denim jeans have become a universal icon

The twilled coolness of Denim

By **Martin Kugler**



Ian Berry in his Studio - photo Debbie Bragg.



Denim cushions for interior design - photo Martin Kugler.

Here's the story of how a fabric, which started out as utilitarian and then became a fashion icon, is used in graphic design and in the arts. Originally registered as a patent back in 1873, denim jeans have now become a universal icon. At first eagerly adopted by gold miners and cowboys, then by Hollywood actors and rock and roll stars, denim jeans managed to firmly establish themselves as a unique symbol of both utilitarian sturdiness and stylishness for anti-establishment rebels and fashionistas alike.

Today denim jeans represent a universal clothing style that transcends usage, age and class. In addition to being wearable and utilitarian, denim has been widely used in arts and graphics - in its original material, as a digitally printed texture and as a full or partial wrap on vehicles or designer objects.

From rags to riches

Throughout its long history the design of denim jeans has evolved significantly, with rivets, belt loops and zippers being added and new styles designed by fashion houses. When the original patent expired, other manufacturers such as Wrangler and Lee joined this lucrative market, assisted by wartime procurement. In the 1940s



Denim detail - photo ianberry.art.

Hollywood movies promoted the romantic image of the denim wearing cowboy (or sheriff as portrayed by Gary Cooper, John Wayne and others). During the fifties counterculture rebels associated denim with the new male cool style (think James Dean or Marlon Brando). Since the 1960s almost every movement has used

the positive image of denim to support its cause: hippies, feminists, punks, greens and anti-anything demonstrators promoted the commercial success of their preferred textile. Eventually, luxury labels introduced designer denim wear to cater for aficionados willing to pay a lot of money for it. However, denim can



The Morning After - photo ianberry.art.

still be controversial as certain workplaces, schools and theatres still ban denim jeans because of their symbolic value.

A tale of four cities

Invented by Jacob Davis, a tailor, and Levi Strauss, a wholesaler and textile magnate, the classic denim jeans originated in San Francisco. The indigo-dyed jeans fabric, referred to as "Denim", was originally made after a pattern manufactured in the town of Nîmes in the south of France - i.e. bleu de Nîmes which became blue denim. The word "jeans" was already used to refer to trousers in the early 1800s and is derived from the name of the Italian city of Genoa, Gênes in French, where the famous twill cotton fabric was first used for clothing.

Capital of the denim universe

Today the story continues in Amsterdam, which became the economic capital of the denim universe. Some of the biggest names in denim have offices or even headquarters in the Dutch metropolis. They include G-Star, Levi's, Pepe Jeans, PVH (Calvin Klein and Tommy Hilfiger), Scotch & Soda and Wrangler, whilst Good Genes, Kuyichi and Tenue de Nîmes have their flagship stores in the city.

ROC in Amsterdam

Proof that Amsterdam wants to be a major player in the world of denim is no doubt the fact that it is offering a fashion design and product management course to become a Denim Developer. The 3 year technical training course in denim styling and development is held at the ROC in Amsterdam, a professional community college with branches throughout the city. Graduates acquire the necessary skills and expertise to forge a new generation of developers and designers in the denim

industry. When students graduate they will be proficient in the traditional skills of their trade, i.e. drawing, cutting, sewing, stitching and washing are all part of the syllabus. The course focuses on international careers and includes tutoring by professionals from leading jeans brands. An internship in the styling or production development department of a denim manufacturer completes the course. Admission requires a denim portfolio that demonstrates a proven passion for denim.

The artist's way in denim

The British artist Ian Berry creates his art exclusively from denim. He employs denim patches from used clothing, in different shades and faded to various degrees, and creates works that encompass picture mosaics, commissioned portraits, sculptures and interior decoration.

The process involves cutting, stitching and

gluing different patches of denim to create what looks at first glance like a painting or a photograph with a heavy bluish tint, particularly when viewed on a computer screen. Upon closer inspection, however, the amazing patchwork of layers and textures reveals a kind of collage with a three dimensional surface made up of countless pieces of denim.

Artwork

Each tiny piece of denim in Ian Berry's artwork is indeed similar to the strokes of a paintbrush on a conventional painting. Looking at it closely, as the artist puts it "you become aware of the depth and texture and see how each small piece of denim has been crafted out of washed and faded jeans material, which helps to create that painterly tone."

Where traditional artists use paint and brush, Ian Berry uses the "most democratic of fabrics", scissors and glue and creates works of art in which the medium is definitely part of the message. Ian Berry's work will be on display from 30 June 2019 in the Catto Gallery in Hampstead (London).

Further reading:

www.historyofjeans.com
www.ianberry.org
www.rocva.nl



Denim with added value damage - photo Martin Kugler.



Digital print vinyl full wrap - photo Hexis.

Doubling business volumes and turnover within five years

India based Bliss Impex invests in four Durst Alpha systems

By Ton Rombout



Bliss Impex management with Durst managers.

Bliss Impex, the international manufacturer of synthetic textiles, printing and apparel fabrics based in Delhi, recently invested in four Durst Alpha systems – three Alpha 190 Reactive machines and one Durst Alpha 180 printer for polyester work.

The cost-effective proven digital technology, which delivers industrial scale production in excess of 10,000,000 linear meters per month, is expected to replace the conventional textile printing set-up at Bliss Impex within three years. Ultimately the company aims to double business volumes and turnover within five years.

More to come

The company has pledged to invest in more Durst systems in a seismic switch over to industrial digital textile production. Brand owners and designers are increasingly demanding that their orders are printed on the

four Durst production systems, to benefit from fast turnaround cycles in which orders can be processed and delivered within two days, rather than the earlier typical 15-30 day cycle.

Digital revolution

"This is the future," commented Ekansh Jain, Director of Bliss Impex. "Durst's cost-effective proven technology in a price sensitive market is revolutionising our business. The machines are incredibly flexible with no limitations on colour. The Alphas enable us to print on an endless list of materials, including many that used to need pre-coating. The quality gives us a competitive edge; the sharpness and brightness really

stand out. Buyers and designers are most impressed and are even asking for digital printing." He continued: "One example of how we are opening up new opportunities with brands relates to H&M, which needed to print on sushi foil for a specific ladies' garment. We actually completed the 300,000 linear meter order within 20 days. This couldn't have been done conventionally in that timescale because we needed many different colours and lots of merging. The incredible quality speaks for itself. This is a seismic shift in the industry, coinciding with people being introduced to the benefits of digital. This has been a real partnership with

BLISS IMPEX

Bliss Impex logo.



Bliss Impex-Operator.

Durst, a company that provides world-class support and service. Our unit here may well run completely on digital in as little as three years."

Market position

He concluded: "We are on top with our exclusive products range, best results and our services in India. In abroad we don't have much direct exposure yet as we print fabrics for buyers and exporters and they use it for End Product garments, which they export to abroad. We have the best and most advanced machines and no competition. If we compare our products it's a sheer blend of Durst technology and our expertise that makes us deliver exclusive product in market."

Bliss Impex exports 80% of its business and counts many globally-recognised brands among its clients. In a price-sensitive market, the company now relies heavily on Durst proven technology for industrial-scale production. Less wastage, fast-turnaround on orders, no limitations on colour and printing on virtually any materials are among major benefits in a seismic change to digital production of over 10,000,000 linear meters a month.

Benefits

With virtually no wastage, no limitations on colour configurations and GOTS certified inks, Bliss Impex is confident of achieving fast-track future growth. The Alphas use Durst One-Step GOTS certified reactive ink, which was specifically developed for the Alpha series of printers.

The four Durst machines represent a major part of a €6 million investment in a temperature-controlled digital production centre for the Bliss Impex group, which employs a total of 300 people and generates a turnover of €17.5 million.

Comments from Durst

Rajiv Verma, Managing Director of Durst India, commented as follows: "Bliss Impex is a first-class example of how production requirements for short run orders, high quality, fast delivery and the ability to quickly respond to market trends are driving the

digital transformation."

Martin Winkler, Segment Manager at Durst Textile Printing, remarked: "We know from experience that buyers and designers are also constantly driving change, particularly now that ink prices are at an attractive level for users. Cost transparency and predictability are crucial. We've worked in close partnership with Bliss Impex, a company that is using proven technology to push barriers and promote innovation in textiles. It truly is a redefinition of the production processes." •



Magnificent results with vibrant colours shown in printed fabrics.

Alpha Series Multi-Pass Textile

The Alpha Series features sustainable and eco-friendly print technology. It is designed for economic productivity and efficient processes, minimizes warehousing with just-in-time production and produces optimum print quality based on unlimited colour and design complexity. The Alpha Series combines new process technologies to control the interactions of print heads, ink system, textile material, fabric type, pre-treatment and finishing, thereby making them reproducible with the best performance.

Alpha 190 Multi Pass Textile

With the new Alpha 190 Durst is offering various configurations in the entry and exit units to print on super-elastic knit fabrics, which is of particular interest to the fashion industry. The fabric management system facilitates extremely fast changes of the feeding roll.

Alpha 180 TR Industrial Dye Sublimation Durst is expanding its successful portfolio of high performance inkjet printers with the new Alpha 180 TR Dye Sublimation Printer. The company now offers transfer paper printing for the textile industry, using the same printer as the one used for direct digital output. Printing on sublimation paper and then transferring by calendar simplifies printing on certain fabrics. This very eco-friendly solution

gives companies in other sectors the opportunity to move into textile production. The Alpha 180 TR is particularly suitable for woven polyester and PES blends, commonly used for sportswear, home textiles and soft-signage. Durst also offers a specially formulated Dye Sublimation Ink System: water-based, odour-free, skin friendly and free from volatile organic compounds (VOCs). This printing system is classified for all current transfer papers at maximum quality. The changeover between transfer paper and direct fabric printing only takes a few minutes and can easily be managed by a single operator.

Alpha Inks

Durst offers eco-friendly, water-based ink solutions for the Alpha Printing Systems in Disperse, Sublimation, Reactive (Acid) and the new Greentex-P ink system, the best binder-inclusive digital Pigment available on the market. The Greentex pigment ink system is developed for efficient and economical application on a large number of textile materials. Its main characteristics include outstanding colour reproduction and a smooth, soft touch. There's no need for pre-treatment and finishing on some standard applications, which makes the Alpha Pigment an ideal all-round choice for the production process.

HP expands digital textile printing for soft signage and decoration

New extra wide Stitch S1000

By Ton Rombout



HP Stitch S500 Standard Front.

HP Stitch portfolio

The printer made its global debut at the HP Stand during FESPA 2019. The new HP Stitch portfolio, which includes the 1.62 m (64 inch) HP Stitch S300 and S500 printers, eliminates the complexity of dye sublimation printing. HP unveiled the HP Stitch S300 and Stitch S500 at the recent ISA Sign Expo in Las Vegas. Both printers have a print width of 160 cm and a 4-colour ink set. The S300 entry-level model comes with Ergosoft RIP Color Edition. It uses 750 ml cartridges. The S500 production model prints up to 110 m² per hour on paper and works with 3 litre tanks. HP has managed to keep the drying path and drying time short on the S300 and S500 and uses warm air, which is blown along the print heads over the newly printed material. Transfer paper does not have time to bulge, which benefits processability and dimensional stability.

The recently announced HP Stitch S-Series dye sublimation portfolio gives emphasis to HP's entry into the fashion, soft signage and interior textiles industry. The company introduced its HP Stitch S1000, a dye sublimation production printer, at FESPA 2019. With its high productivity and easy operation, this design offers new production possibilities for interior decoration and soft signage.

Having been interested in the textile market for some time, HP is now taking it one step further and actually developing textile printers. The 126 inch HP Stitch S1000 printer, the latest addition to the recently announced HP Stitch portfolio, facilitates dye sub production for extra wide applications. The printer delivers high quality on transfer paper and direct-to-fabric. Its simple operation and high productivity also creates less waste.

Specifications

The HP Stitch S1000 is a 3.2 m (126 inch) wide dye sublimation printer. Offering high speed, high uptime and optional unmanaged production it can meet deadlines with greater

ease. Fully automated maintenance ensures optimum image quality and saves time as media can easily be loaded by a single operator.



HP Stitch S300 Closeup-Front panel.

Statement

"Our expansion into the textile industry reinforces our commitment to making digital printing accessible to everyone. With the new HP Stitch S1000 we take the complexity out of dye sub printing, using industry leading technology, high quality printing and unrivalled speed," stated Santi Morera, Head of Graphics Solutions Business at HP. "Using smart technology, the S1000 makes colour matching easy in dye sub production environments."

HP's thermal inkjet for dye sublimation ink

HP is in fact starting with printers equipped with a newly developed dye sub ink, which can be used on paper or directly onto textile. HP uses a variant of its existing print engine equipped with thermal inkjet print heads. Many elements of the HP Latex printers can be found



HP Stitch S300 Standard Front.



Stitch with picture.

here, including built-in drop control and photo spectral meters. The input and output rollers on the front are also comparable. The HP Stitch portfolio introduces sublimation ink for HP's thermal inkjet printing technology in order to meet the increasing demand for polyester based textiles for sportswear, fashion, interior decoration and soft signage. The HP Stitch S1000 is ideal for medium and large print service providers, facilitating the production of soft signage textile applications such as backlits, frontlits and interior decoration such as curtains, upholstery and sofas.

Large volume production features

The HP Stitch S1000 offers the following features for large production volumes: High productivity: Manage short deadlines and seasonal production peaks with high productivity, with a maximum production speed of up to 220 m²/h and a backlit mode of up to 130 m²/h. Image quality: Sharp prints, even with high ink density jobs, without bulging transfer paper using the HP Drop & Dry Print Zone Dryer. Reliable image quality thanks to the Smart

Nozzle Compensation System. The OMAS Plus optical media advance sensor controls the media flow for both transfer paper and fabric materials, ensuring streak-free high speed printing. Superior quality printing: The HP Stitch offers 1200 native dpi in thermal inkjet print heads, resulting in high quality prints, including deep black and vibrant colours. High capacity: high unmanaged print capacity with 10 litre supplies and up to 300 kg rolls. Colour consistency: Distribute jobs across different printers that have the best colour consistency in their class thanks to HP Smart Colour tools. Maximize uptime with user friendly replaceable print heads and HP Smart Services.

Prices and availability

Prices, points of sale and availability in each country of the HP Stitch S Printers Series vary per region. Based on HP and third party test results comparing HP Stitch S Printers with other large format dye sublimation printers on the market below \$ 250,000 (USD) in March 2019. For

more information, visit hp.com/go/stitchclaims. Obviously, prices and availability are subject to change. •

Bannerhero first customer for HP's new line of Stitch dye sub printers

HP confirmed that the Berlin based specialist purchased one of its "super wide workhorse" Stitch S1000 devices, which was formally unveiled on the first day of Fespa 2019. The four colour S1000 prints both direct and transfer at up to 220m²/hr. Bannerhero Managing Director, Gökhan Yilmaz, commented as follows: "We are really keen to put the Stitch into operation and offer our customers fast colour matching and new production capabilities for interior design and soft signage." Early sales of the S1000's 1.6m wide siblings, the S300 and S500, will be announced by HP in due course.



Overview of SPGPrints booth at ITMA.

A key player in high volume digital textile printing, also in smaller runs

SPGPrints at ITMA Barcelona

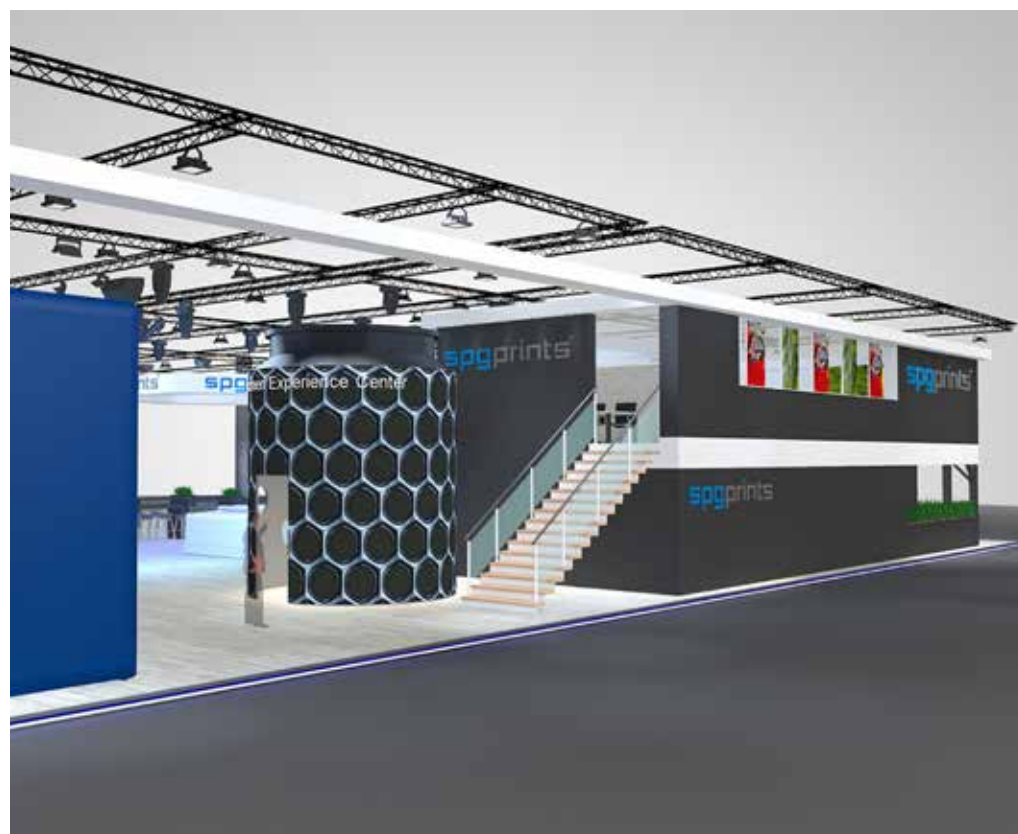
By **Ton Rombout**

Although the origins of SignPro Europe are to be found in the signage and wide format printing business, in recent years we have focused more and more on textile printing in its many different forms and we consequently feel we have to ask our readership what they know about ITMA, which will be held in Barcelona (Spain) this year (see box).

For SPGPrints ITMA is far more important than FESPA. Originating from – and still very prominent in – the high volume rotary screen printing market for textiles, with many novelties to its name such as rotary screen printing machines, unique screen technology and laser engraving systems and already well established in that same market with groundbreaking equipment such as the PIKE and JAVELIN for high volume digital textile printing, ITMA is the ultimate venue to meet and show customers in the high end textile market the possibilities of, and advances in, digital textile printing.

All you need in printing

The central theme for SPGPrints at ITMA will be ‘All you need in printing’, a fitting concept for the



Overview Technology Centre SPGPrints at ITMA.

ITMA

Organised by ITMA Services, the upcoming ITMA will be held from 20 to 26 June 2019 at Fira De Barcelona, Gran Via in Barcelona.

ITMA promotes itself as the world's largest international textile and garment technology exhibition. Ownership of the show is in the hands of CEMATEX, the European Committee of Textile Machinery Manufacturers, which has its headquarters in the UK and subsidiaries in many other European countries.

ITMA is the trendsetting textile and garment technology platform where the industry converges every four years to explore fresh ideas, effective solutions and collaborative partnerships for business growth. Technological innovation, a basic of industry

transformation, is pivotal to the success of the textile and garment industry.

ITMA 2019 provides an unrivalled marketplace and knowledge platform. It is expected to:

- feature 19 Exhibit Sectors, with integrated solutions for the entire value chain;
- attract 120,000 visitors from 147 countries;
- showcase 220,000 m2 (gross) of advanced technologies and live machinery demonstrations;
- attract 1,600 Exhibitors, with original manufacturers from 46 countries;
- and cover/incorporate global insights, trends and issues, industry conferences and forums.

SPGPrints brand, which delivers rotary screen textile printing, laser engraving systems and high volume digital textile printing equipment and consumables to the market. At ITMA, visitors will be able to see and experience their two flagship digital textile printers, the PIKE and the JAVELIN, in real production mode, together with the company's rotary screen printing and laser engraving systems.

Occupying the one of the largest booth at ITMA, almost 1800 m2, SPGPrints will show that it has ‘all you need in printing’, not only with presentations by specialists several times a day, but also with ‘real life’ digital textile printing equipment demonstrations. Early users of the PIKE and the JAVELIN, will report on their experiences with this relatively new digital textile printing equipment.

Technological ownership of amazing discoveries

SPGPrints will also in due course provide further details on the two Experience Centers it will feature at the show. One will focus on rotary screen technology - invented by SPGPrints, formerly Stork, in 1963 and further developed over the years to accommodate the needs of many larger textile printing companies worldwide - the other on digital textile inks, used in all leading digital textile printers from various brands and of course in SPGPrints' won printers PIKE and JAVELIN today.

It are trueExperience Centers as visitors can not only see and hear about these technologies, but actually experience them (for information visit www.spgprints.com). They will highlight that SPGPrints is at the forefront of new technology in digital textile printing, owns specific knowledge of textiles and is familiar with digital textile printing in high volumes, as well as low runs.

Emphasis on sustainability and standards

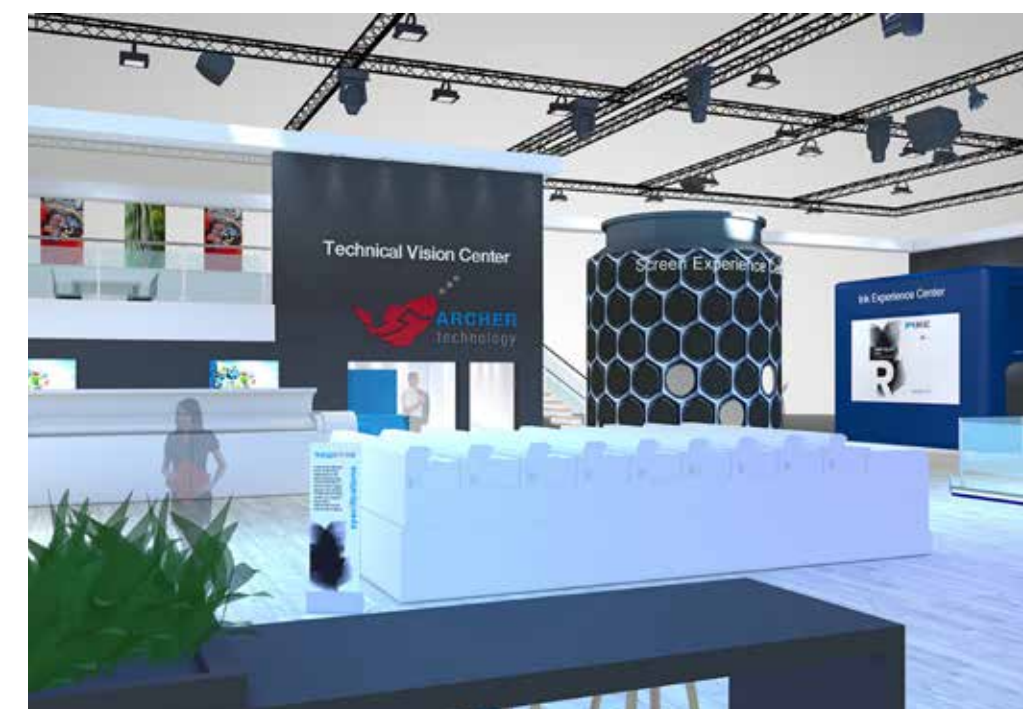
SPGPrints will also explain its approach to sustainability, emphasizing that this issue is of paramount importance for every manufacturer and production company producing textile prints in this day and age. As a manufacturer of inks and equipment, SPGPrints always operates in accordance with current standards, both as a company and in the way its systems are built, to ensure maximum compliance at all times. Jos Notermans, SPGPrints Marketing and Sales Manager, explained that from the the company aimed to develop consumables such as screens, templates and inks in a sustainable manner. “Also, being one of the largest

producers in the world, we want to comply with regulations that all strive to avoid the use of certain chemicals and other noxious materials.” He admitted that sustainability is a difficult issue, involving a number of sometimes competing regulations, also originating from the larger brands in the textile industry as a result of pressure from the public. He referred to Greenpeace with the Detox norm, which will be observed by a number of brands, as well as standards imposed by one company such as Inditex, well known owner of Zara.

“We continuously manage these regulations that are created by brands in their so called MRSL, the Material Restricted Substance List. Today, SPGPrints complies to over 50 MRSL's from the same amounts of brands, besides the compliance to global standards such as Eco Passport, Oekotex and GOTS. We are currently in the process of getting our inks comply to the ZDHC (Zero Discharge Hazardous Chemicals) standard that we see as a sort of umbrella standard that covers all existing standards and MRSL's.

During the course of 2019 all our major inks will comply with this standard.”

He concluded: “To be 100% sustainable, using no water and producing no waste, is akin to utopia in this business, but we are at the forefront making every effort to do the best we can. We are developing a ‘sustainability’ video for ITMA focusing on a central theme: ‘How can we help our customers with our products to achieve maximum sustainability in their production processes?’ In the meantime we are obviously developing our own equipment and consumables with maximum sustainability in mind.” •



Explanation of Archer Technology at ITMA.

Next generation, single-pass digital textile printer

EFI Reggiani BOLT at ITMA

By Ton Rombout

During an open house event at the end of last year at the company's facility in Bergamo (Italy), EFI Reggiani released an advanced ultra high speed digital single-pass printer with the potential to revolutionise the textile printing market.

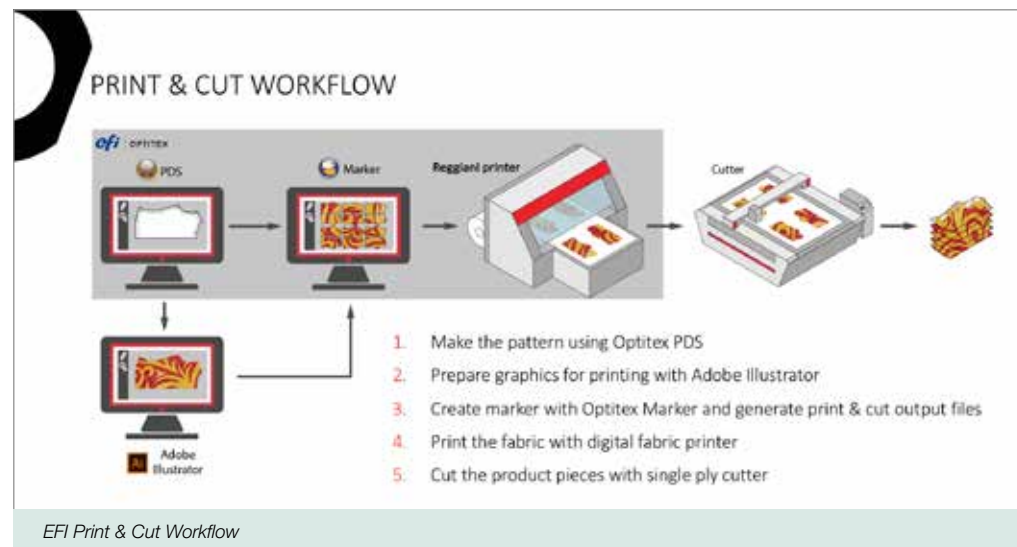
It delivers high uptime and reliability, outstanding performance, superior printing uniformity and accuracy, long print head life and minimal maintenance needs. The EFI Reggiani open house created huge interest in global textile market opportunities, with almost 300 customers and journalists attending to see the new BOLT in action.

70 year history

The innovative development of this new single-pass printer is based on Reggiani's 70 year history and proprietary knowledge of high volume analogue rotary printing." EFI Reggiani Vice President and General Manager, Adele Genoni, explained. Obviously also because EFI Reggiani is able to speed up its innovation in digital textile printing in symbiosis with the digital technology of Electronics for Imaging – EFI. Moreover, EFI Reggiani specifically listens to and addresses its existing textile customers' needs, with a significant presence of textile printing equipment in the field. Reggiani is one of the few companies now going 'digital' with a global track record of textile printing companies making money with rotary screen printing, providing various major textile brands across the world with printed textile products.



Textile Print from the BOLT.



Cutting edge print head technology

According to EFI Reggiani the BOLT offers an innovative, low maintenance, fast start-up recirculation print head that delivers better, more uniform printing with superior uptime. Thanks to this print head concept and a high performance ink delivery system, the BOLT achieves throughput speeds of up to 90 m/minute (more than 8,000 m²/h) at a 600 x 600 dots per inch (dpi) resolution. It features high-end greyscale imaging in drop sizes between 5 and 30 picolitres and produces premium quality 600 x 4,800 maximum-dpi resolution printing, enabling customers to address the full range of design requirements. The print head, which has been developed in partnership with a leading print head manufacturer, will be available exclusively to EFI Reggiani.



EFI Reggiani Vice President and General Manager, Adele Genoni

Paired with an EFI Fiery digital front end (DFE) print server, the BOLT offers unique, high-speed processing capabilities on demand. This makes the BOLT printer a robust industrial platform designed for 24/7 operation and continuous productivity, driving high volume throughput whilst reducing the cost per metre.

Colour expertise and management

EFI's expertise in colour management and flexible colour configurations helps customers reproduce a wider variety of work, including designs featuring plain colours, geometric patterns, fine lines, deep blacks and smooth gradients. Fiery technologies for the printer give textile printing businesses the ability to successfully produce highly challenging jobs incorporating extremely fine detail, demanding colours, smooth gradients etc. EFI colour scientists developed special algorithms and custom screening for this Fiery system to deliver vivid print results, including high saturation without losing detail and superior colour even in the fastest print mode. EFI Fiery DesignPro, a powerful textile and fashion design suite, reduces the time needed to create colour books, repeats and colour ways. It also cuts the time needed to prepare files for production down to minutes rather than hours. Together, the new Reggiani BOLT single-pass printer and Fiery technologies address key

market trends as customers face pressure for faster time-to-market, quick fashion cycles, shorter print runs and increased customisation.

Other innovations

The BOLT printer is the latest in an important series of EFI Reggiani innovations. Over the past 15 months the team has developed a totally new range of digital scanning printers with cutting edge technologies, launching a new model every quarter to offer customers solutions for any requirements relating to easily scalable textile printing. The list of EFI Reggiani advancements includes two recent launches - the COLORS digital printer, which delivers unparalleled performance with up to 12-colour printing, and the TERRA pigment ink with binder solution featuring in-line polymerisation, a process that speeds up customers' printing operations with one of the industry's greenest production technologies.

The new EFI Reggiani pigment ink technology offers users a faster, environmentally friendly production process with inline polymerisation that requires less water, energy and processing time, with no washing or steaming needed. The ink's excellent fastness properties and high printability sharpness also facilitate printing on a wide range

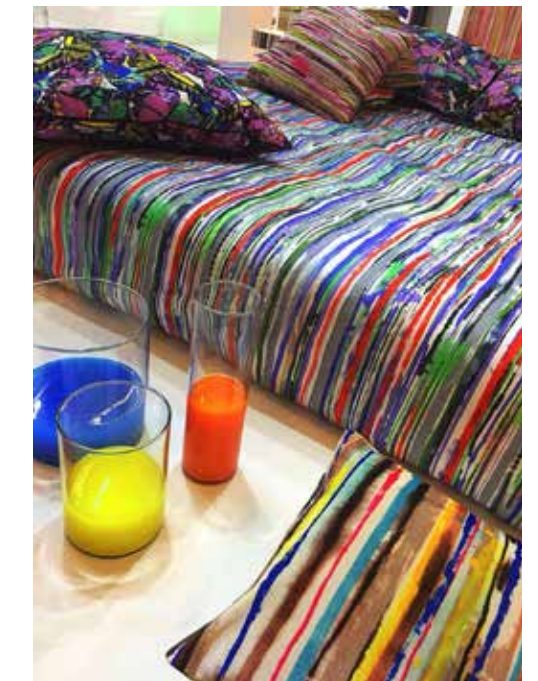


Pictures on this page: all textile designs from EFI REGgiani BOLT.

of fabrics with fine detail designs. The company also released the EFI Reggiani FLEXY, a versatile printer that handles a wide variety of fabrics, from knitted and woven to low and high stretch materials. The closely integrated mini-factory gives textile producers a smoother, more coherent, production aware workflow by connecting EFI technologies as well as key workflow and cut-and-sew solutions from other leading vendors for true end-to-end productivity.

Optitex software

EFI also recently released the latest version of the EFI Optitex 2D/3D CAD platform, creating a more powerful end-to-end digital solution that gives apparel manufacturers the ability to produce small mixed orders on a single roll, to better address market trends and to offer increased sustainability in fashion design and development. The new software version delivers key enhancements to Optitex's industry leading end to end



solution capabilities for fashion, apparel and textile, including a new and innovative Print & Cut solution that enables printing of any garment patterns on a single roll.

"To respond to the fast pace of fashion and today's changing buying behaviours the implementation of end to end digital workflows is no longer a 'nice-to-have', it is survival. This new Optitex release makes it possible to automate the complete design to production preparation process, enabling customers to focus on creativity, accelerate execution and deliver the customisation required in today's demanding market," Amir Lehr, the EFI Optitex General Manager, explained. "As on demand manufacturing of fashion and apparel continues to gain traction around the world, this new release offers the necessary efficiencies required to meet market demand for faster time to market, accuracy, customisation and personalisation, as well as the profitable and timely production of small mixed orders."

EFI Optitex offers features such as advanced automation tools, including true to life fabric simulation, cross-size simulation and multi-colour way multi-angle rendering, new power tools to simplify complex stitching, improved grading, ease of design for bags & pockets, an expanded library of 150 commonly used fabrics, an all-in-one avatar solution and an improved user interface.

The new Optitex version's industry changing Print & Cut solution for complete garment printing on a single roll generates significant savings in fabric roll inventory, with typically 15%-40% greater efficiency compared to traditional methods. Fashion and apparel manufacturers also benefit from an improved nesting algorithm that increases fabric utilisation by up to 4%. •

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Wide range of materials for printing on textiles

TTS to offer broad spectrum at ITMA

By Ton Rombout

New premises, two new stock locations and quite a few new products for the textile printing market, Texo Trading Services – TTS – has interesting news for screen and digital textile printers all over Europe. TTS continues to explore how it can improve and speed up the services it provides to its customers.

The expert in transfer printing media and printable textiles opened two new stock facilities in Europe last year: in Leicester (UK) and in the French capital Paris. The market demands faster delivery. TTS' response translated into new stock locations with a range of quality products tailored to customers in the surrounding regions. In addition to the warehouses in Leicester, Paris and at the head-quarters (in the Netherlands), TTS has also maintained a stock facility in the Italian city of Como for many years.

Range of materials at ITMA

Texo Trade Service intends showcase a range of different media at ITMA Barcelona:

- Calender protection paper, a light, but very strong and 'closed' paper, converted by TTS that can be delivered worldwide from stock in different locations, in various widths between 15 cm and 504 cm and in 17, 20 and 28 gsm.
- Also available is a 32 gsm protection paper in 320 cm for calender protection, with a two-sided release coating to avoid it sticks to textiles such as Blackback or coated textiles for tents or lightboxes.
- Subli-Lining, a lining which makes it possible to print natural fabrics such as cotton, linen and silk using sublimation transfer, with deep and vivid colours. It is washing machine proof and abrasion resistant without changing the appearance

and hand of the fabric.

- SX10ECv3: a semi-coated economic sublimation paper for jobs where good enough is enough.
- At ITMA TTS will present not only new textiles as alternatives to PVC Mesh outdoor banners, but also a new stretchable fabric for textile frames, as well as textiles for rear panels in light boxes.

Paper and foil for screen printing

TTS is not only an expert in printable textiles, it has also been manufacturing transfer paper and foil for screen printing for more than 20 years. Its CP105 and NCP105 transfer papers are particularly suitable for plastisol and water-based screen printing inks. In terms of transparent, screen printing transfer foil, TTS offers a variety of cold-peel and (instant) hot-peel foils that are suitable for all types of ink.

Contemporary, completely energy neutral business premises

Texo Trade Services is Europe's leading manufacturer and distributor of dye sublimation transfer papers, calender protection paper, printable textile and textile finishing products for the visual communication, interior design and active wear industries. At the end of last year Texo Trade Services moved to newly built premises located on the Gouwe Park business estate in Moordrecht. With a surface area of 6,000 m², it is not only much larger than the current premises, it is also completely energy neutral.

Floris-Jan van den Heuvel, Director of TTS, explained as follows: "We expect that the market for digital textile printing will continue to grow worldwide. More and more textiles will be used, particularly in segments such as retail and stand construction. Companies that print textiles for the fashion and/or interior design segments are also moving over to digital production. Because our new building will provide more storage capacity and an efficient warehouse, we can work more quickly at a lower cost and respond to growing market demand."

Visit TTS at ITMA

For 20 years our customers have relied on our extensive experience in the field of textile and transfer printing. With a wide range of products in stock we can respond quickly to market



Impression of the new warehouse and head office of TTS in Moordrecht.



Rolls of 03-Sublimationpaper.



Texo Trade Service stand.

demand. Having in-house production, cutting and conversion facilities, we can offer tailor made solutions at competitive prices. This is demonstrated by the fact that we have satisfied customers in more than 55 countries worldwide.

TTS experts will be on hand at ITMA and happy to welcome you to their stand: number in Hall. •

For further information visit:
www.texo-trade.com

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Impression of the new warehouse and head office of TTS in Moordrecht.

For industrial applications, creative design and sign and display

Cuthings offers milling and cutting services to third parties

By Ton Rombout



Kristof Weckx, Managing Director of Cuthings.



Simple but effective menu plate for restaurant.



Office desk, designed by product designer Jonas NeoFabry.

The only information I had on Cuthings, when I visited its premises in Heusden-Zolder in Belgium, was that the company uses Zünd-CNC equipment. Kristof Weckx, Managing Director of Cuthings, kindly invited me to come and see for myself what the company is all about. Cuthings is an independent supplier of cutting and milling services, mainly to the Dutch and Belgian markets, with some customers based in France and Germany – Kristof Weckx explained. The company targets its services at roughly three market segments, i.e. industrial applications, the creative design sector and the sign and display printing sector.

Company's origins

Cuthings' history provides an insight into the company's current activities. Kristof Weckx, who was project engineer for an engineering agency with customers that included companies in the automotive industry, decided in

2014 to join forces with six other shareholders/ investors and invest in a new venture. Although their activities initially focused on cutting products in the leather goods industry, including finishing of handbags and other items, the company's activities soon extended into other areas. In fact, because of his earlier work Kristof was familiar with this type of customer and their requirements. Kristof now manages the company, with the other investors acting as silent partners.

Applications for the automotive industry

When Kristof Weckx, who was by far the largest shareholder, came into contact with Zünd, the producer of cutting and milling machines, he recognised the potential to significantly expand his sphere of activities. As a result Cuthings soon developed into a cutting and milling service provider for lightweight components and packaging in the automotive industry – projects that are still ongoing five years on. Other specialist activities relate to the

production of hydrogen vehicles involving the optimisation of fuel cells that convert hydrogen into electricity. Also, for example, the cutting and processing of carbon fibres for bodywork and chassis components and the optimisation of acoustic insulation systems in the wheel geometry to reduce cabin noise. Cuthings customers are interested in the company's services specifically because of the precision of the Zünd equipment that is being used, the quality of cut components, the minimisation of error margins and ultimately the price, as subcontracting provides a highly cost effective approach for these companies.

Expansion into other sectors

In addition to the Zünd G3 cutting and milling machine, a second G3 machine soon appeared two years later because other sectors were showing interest in the range of services offered by Cuthings, not just other industrial sectors but also creative design sectors. Product designer and production manager Jonas Neo Fabry also attended our meeting. He develops furniture, e.g. tables and chairs, on behalf of Cuthings, which is bought by third parties or often made to order. He also makes jewellery, for example. In fact anything goes. He may, for example, design a door lock that fits seamlessly into a specific structure and that may subsequently go into production. He explained: "A product designer looks for solutions. In fact I have to interpret the customer's wishes and process the model on the computer using appropriate software programmes. This ranges from minor designs to extensive and complex models. Using these creative programmes I can then transfer the file into the Zünd programmes in order to create and optimise a successful model on the cutting or milling machine."



View on the factory area at Cuthings.

Sign and display products

Subcontracted work from mainly large format print companies and sign makers is one category of activities that has become quite substantial and continues to increase rapidly. These companies often primarily focus on the print product and don't have any cutting or milling machines in-house, or have too much work to handle on their own cutting machine and are forced to subcontract some of it. "Or they may not have a specific expertise that we do have," Kristof Weckx added. "Or it involves what we call 'delicate' production, e.g. 300 aluminium menu cards that have to be cut or milled with great accuracy." He continued: "Another key aspect is that many companies do not have the appropriate skills in-house. Sometimes they have the equipment but not the skilled operators that we have. Obviously, we at Cuthings always aim to organise various operations with maximum efficiency."

Other developments

At the end of the meeting Kristof Weckx also referred to a number of key issues that are currently important and under the spotlight with a view to further expansion.

- "We are in the process of setting up a second subsidiary near Kortrijk as it is important to be close to the customer in this business.
- We are also developing our online portal, to make the uploading of files easier and more secure and facilitate the placement of orders.
- The arrival of a third Zünd G3 XL3200 with a more robust milling module. This is important because this kind of milling module can finish certain products more accurately than before, which in turn will enable us to safely expand this industrial segment."

Why Zünd?

At the end of the conversation I took the liberty to ask why Cuthings opted for Zünd. The answer was quite decisive: Eersel, where



Kristof and Jonas by Zünd G3 cutter.



Leather fashion bag designed by Jonas.

Even their business cards have been cut by Zünd equipment.



Zünd's Benelux subsidiary is located, is relatively close by. However, that is not the prime reason. Kristof Weckx also referred to the personal aspect: the excellent relationship with Stephan Jacobs of Zünd Benelux in terms of the overall supervision of the project and development of his own company, Cuthings. "We are in regular contact and dialogue concerning our ongoing development and have received quite a few very useful tips over the years. The company also offers outstanding technical support."

Q.E.D. - thus it has been demonstrated... •

Game-changing technology at ITMA Barcelona

Kornit Digital to show new direct-to-garment printing systems and to launch their latest roll-to-roll innovation!

By **Ton Rombout**

Kornit's display at ITMA will focus on the game-changing technology that was unveiled at the beginning of the year, shown in Fespa Munich and will now also be on display in Barcelona: the Kornit Atlas and the Kornit Avalanche Poly Pro.

On top of that, Kornit is going to reveal the long-awaited successor of the Allegro roll-to-roll printer: the Kornit Presto, which prints on a variety of substrates, eliminates external pre and post processing steps, and is the fastest way to get from the file to the finished fabric. The display will be complemented by a Kornit Storm HD6 and an installation of Colorgate's Textile Production Server for Kornit.

Kornit Presto

In the direct-to-fabric section of the booth at ITMA, the company will show samples from the

new Kornit Presto, the only industrial single-step solution for direct-to-fabric printing. Kornit is targeting its 1.80 m wide Presto direct-to-fabric device at the home décor market. The company has just announced a new ink that

makes the Presto much faster even than the previous Kornit Allegro, and more productive. Relevant samples will be available from the booth at ITMA. The Kornit Presto solution eliminates the need for fabric pre and post treatment and facilitates high quality printing on an extraordinarily wide range of fabric types and applications. It does not consume water during the printing process, making it the most environmentally friendly solution available for direct-to-fabric textile printing today.

Kornit Atlas

The Kornit Atlas, a heavy-duty system designed for super-industrial garment decoration businesses, aims to deliver a typical annual production capacity of up to 350,000 impressions, optimizing production efficiency and cost of ownership. It is targeted at highly productive garment decorators, mid to large size screen printers and other innovative businesses looking to combine state of the art technology with lowest cost of ownership, making it easier than ever to address the requirements of leading and mid-sized brands, as well as new generation digital brands. The Kornit Atlas uses water-based Kornit NeoPigment Eco-Rapid

Inks which are eco-friendly, GOTS approved and OEKOTX certified and serve as the main driver of retail quality prints. The Atlas prints six colours plus white, mainly on cotton.

Kornit Avalanche Poly Pro

The Kornit Avalanche Poly Pro (list price around 425,000 euro) features the company's NeoPoly Technology, the industry's first digital industrial process for high quality printing on polyester. The PolyPro initially sprays a conditioning liquid onto a polyester T-shirt, followed by the white print and then the 'poly-enhancer' and Olympia-CMYKRG ink. The system prints in 4 colours plus white, mainly on polyester. Polyester is the second largest category in the overall T-shirt market. It is key in the sports segment and used increasingly in the athleisure and functional apparel segments. Currently polyester is printed predominantly using analog solutions, which presents significant technological, cost and sustainability challenges. The new groundbreaking Kornit NeoPoly Technology addresses these challenges with a new process and ink set applied in the renowned Kornit NeoPigment process. Kornit's new process handles polyester applications without compromising on design, run size, substrate or labour. The Poly Pro will be on show for the first time this year in Europe.

Significant platform

Omer Kulka, Kornit's Vice President of Marketing and Product Strategy, commented: "ITMA continues to be a significant platform for Kornit to promote our innovative technologies and products to the digital printing industry. The systems on display have the potential to disrupt entire market segments. Kornit is on a mission to provide garment decorators, textile producers and web-to-print players the innovation that is required in today's demanding markets."

Kornit Digital

Kornit Digital (NASDAQ:KRNT) develops, manufactures and markets industrial digital printing solutions for the garment, apparel and textile industries. Kornit delivers complete solutions, including digital printing systems, inks, consumables, software and after sales support. Leading the digital direct-to-garment printing market with its exclusive eco-friendly NeoPigment printing process, Kornit specifically focuses on the changing requirements in the textile printing value chain. Kornit's technology enables innovative business models based on web-to-print, on demand and mass customization concepts. Having extensive experience in the direct to garment market, Kornit also offers a revolutionary approach to the roll-to-roll textile printing industry: digital printing with a single ink set onto multiple types of fabric with no additional finishing processes.

Kornit sees huge opportunity in megatrends

Kornit Digital believes its new Avalanche Poly Pro has the potential to "change the market",



Omer Kulka, Kornit's Vice President of Marketing and Product Strategy.



Ronen Samuel, CEO of rapidly growing Kornit Digital.



The Kornit Digital Atlas.



The Kornit Avalanche Poly Pro.

as the garment and textile printing specialist ramps up its product portfolio to address industry megatrends. Ronen Samuel, CEO of the rapidly growing Israeli manufacturer, said there was currently a "perfect storm" underway in apparel and textiles, with four industry megatrends changing the market: personal expression, social media influencers, the boom in e-commerce and sustainability. "Kornit is creating the tools to connect brands and customers. The markets we address are huge. Brands can produce what the customer wants just-in-time and consumers can create exactly what they want." •

Direct, Sublimation, Transfer

By Sonja Angerer

HP recently announced the brand new Stich S series of transfer sublimation printers.



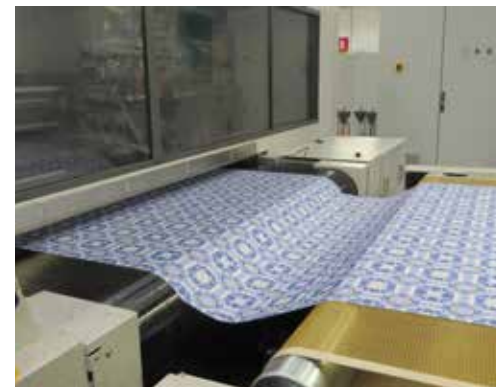
on virtually anything, including textile. Although originally invented specifically for rigid substrates, UV curing inks on very thin fabrics soon became the direct printing technology of choice for light boxes and other backlit high resolution indoor applications. As most of the dye remains on the textile surface, UV curing inks on fabrics produce vibrant colours that are immediately stable, making textile colour management relatively easy.

Eco/light/mild solvent inks

Soft signage applications are also printed (although rarely these days) with eco/light/mild solvent inks and, more frequently, with HP Latex inks. All these direct printing technologies offer a unique but significant advantage to print service providers, as they typically don't require further curing, processing, washing or developing, resulting in a quick and easy workflow. However, soft signage inks are not intended for prolonged contact with human skin or meant to be washed in domestic washing machines. They should not be used for applications of this kind.

Inkjet direct printing versus transfer

Many print service providers specialized in soft signage applications prefer a direct printing process and easier workflow. If UV curing inks are not an option, direct disperse dye may be an alternative. The technology is widely used for flags and other double-sided soft signage



Print from an EFI Reggiani print device.

Digital textile printing is changing the contract and home decoration industry. As the number of applications increases, it will become even more important to choose the right printing technology. The following is an overview of direct and transfer textile printing technologies.

In the home decoration und furnishing industry, digital printing has already changed a workflow that is literally centuries old. Instead of printing a design on textile, waiting for the orders to pour in, many companies now source printed transfer paper worldwide. The decoration is transferred to the textile, using a calendar, only when the item is ready to be produced to order, saving on time, effort, logistics and resources. Twenty years ago, if a decorated product turned out not to be as popular as expected with end consumers, it had to be sold at a minimum price or even recycled. Today's printing technology has reduced inventory and waste to a minimum.

Soft signage versus apparel

There currently are two major textile printing markets with fundamentally different requirements and rules: soft signage and "real" textile printing, the latter a label commonly attached to any fabric intended for use in the fashion or home decoration industry. In essence soft signage is signage printed on textile, which could theoretically be printed on paper or foil also. Printing mainly on synthetic fibre instead of paper or foil has quite a few advantages. Textiles are lightweight, PVC free and add a nice, luxurious touch to signage applications. Soft signage can easily be folded, shipped or stowed away, providing not only logistics advantages, but also making the products potentially reusable.

UV curing inks

UV curing inks hit the digital printing market around the turn of the millennium, partly replacing solvent and water based inks. Because the droplets cure in a fraction of a second under a strong UV light you can print



A heat press is required to fix transfer and direct apparel prints. Photo: S. Angerer

applications, as it sinks deeply into the fabric, providing a decent print through. Some bleed is to be expected though because the ink will not dry immediately.

Dry heat from a heat press or calender fixates the ink deep into the polyester fibre, resulting in a durable dye with moderate outdoor light fastness. Pre-treatment and/or light washing to remove excess ink is recommended for some direct disperse dye applications.

Dye sublimation transfer

The dye sublimation transfer process has become increasingly popular as no washing is required. Companies such as Mimaki, Mutoh, Roland DG and many others have been supplying dye sublimation printers for years. HP recently announced the brand new Stich S series of transfer sublimation printers, showcasing them for the first time in Europe at the Fespa Global Print Expo Munich in May 2019.

Transfer paper

In the dye sublimation process the motive is printed back to front on special transfer paper typically between 50 and 140 gsm. Compared to direct disperse dye and other direct print technologies only a very small amount of ink is used. Application on polyester based or polyester coated textile media is achieved with a dry heat calender. Multi-Plot introduced the "Subli-Fusion" process in 2015, making it possible to sublimate also on cotton and many other fabrics, using a special transfer paper with hot melt adhesives. So far this has remained a niche application though.

In a sublimation process the gaseous ink transfers from the paper into the fabric, but stays quite close to the textile surface, resulting

purposes. The transfer process requires a stable and very narrow calender drum temperature range, typically between 185 and 200 °C, to guarantee colour uniformity. Because this becomes more complicated with the width of the print and calender, digital dye sublimation prints are more common in wide format than in super wide format. As with the direct disperse dye process, the end result on a dye sublimation print in terms of colours is only achieved when the textile leaves the calender, making colour management more difficult.

Garment printing

Although transfer roll-to-roll usually means a dye sublimation process in wide format printing, OKI has managed to establish its LED toner transfer system as an alternative for apparel print. Its brand new Pro9541WT can switch from a regular CMYK toner set to CMY plus white, thus making it possible to print light and dark fabrics using the same printer. In the LED / toner transfer process, which is not a sublimation process, special transfer media are required and transferred onto the fabric using a heat press. The transferred toner print can then be finished with metallic, glitter or other special effects to create a hot stamping foil look.

Pigment inks

Most of today's DTG printers rely on inkjet technology though, jetting pigment inks directly onto apparel. These inks are also available in white, doubling as a base layer on dark textiles. Pigment inks may require pre-treatment and fixation with a heat press or tunnel dryer at 160 to 180 °C. Azon, Brother and Epson, amongst others, are offering DTG printers for sample and smaller run length production. Kornit Digital's portfolio of NeoPigment ink printers also includes industrial strength solutions for DTG apparel and textile printing. The company's brand new NeoPoly process for direct printing onto polyester was introduced in April 2019.

"Real" textile roll-to-roll

Industrial strength roll-to-roll direct textile printing is typically used by specialized printers using the technology alongside textile screen printing. Firmly rooted in the fashion and/or home decoration industry, these companies have extensive knowledge in terms of pre-treatments and textile finishing, colour management on textile and the machinery used to steam, wash and dry cloth. Acid inks are commonly used for direct printing onto wool, silk or Nylon, whilst cotton and other natural fibres stain best with reactive inks. As water based acid and reactive inks are mainly analogue textile printing chemistry made

Read more -->>



Klieverik calenders are known for their stable drum roll temperature. Photo: S. Angererapparel prints. Photo: S. Angerer



Kornit Digital's portfolio of NeoPigment ink printers also includes industrial strength solutions for DTG apparel and textile printing. Photo: S. Angerer

in vibrant colours and crisp lines. Sublimation prints offer a decent indoor light and rub fastness and no white streaking when creased. Whereas UV curing inks take away some of the textile touch, dye sublimation prints preserve it. Most of the sublimation ink's components steam off in the calender so that only the pigments remain. This makes the prints suitable not only for soft signage, but also for certain home decoration and sports fashion

available to digital printing, their light fastness, washability and skin friendliness is comparable to that of their analogue counterparts. Companies such as Mimaki, EFI-Reggiani and Zimmer Austria (among others) are offering digital printers for direct textile roll-to-roll printing.

Direct or transfer printing?

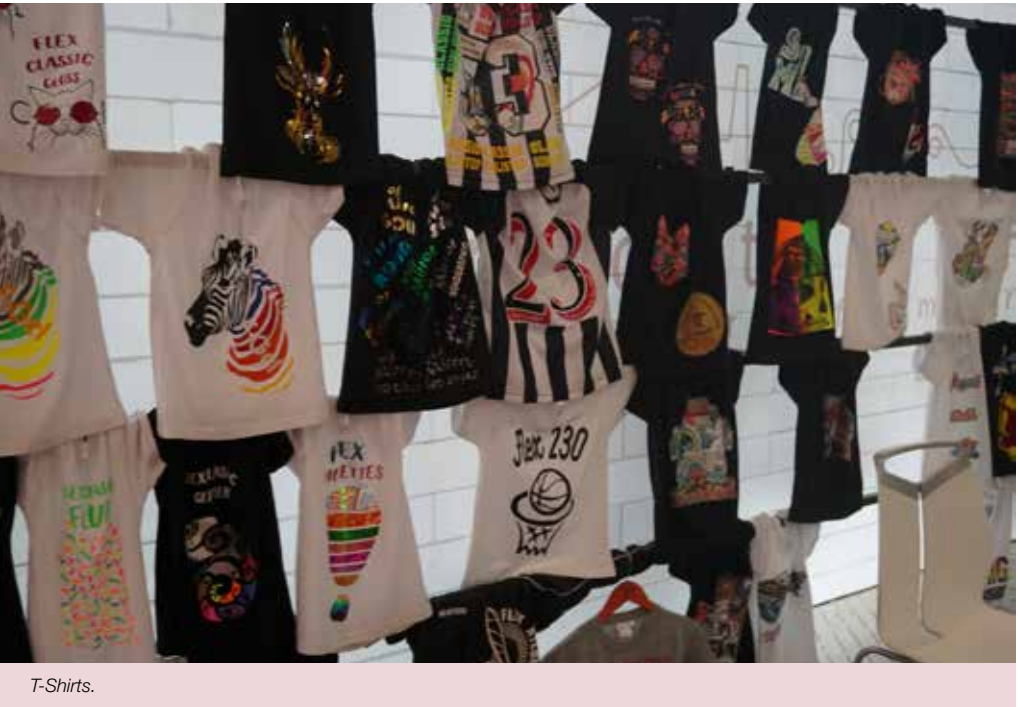
When investing in textile printing, the question as to whether to choose a direct or transfer technology is often considered of paramount importance, when in fact it is only a matter of application. Because transfer printing requires special papers that can be quite costly in industrial run lengths, the technology is widely considered more expensive. The finishing of sublimation textile prints only requires a calendar though.

Pre and post treatment

Depending on the direct printing technology, some direct printing inks will require intensive pre and post treatment, increasing the cost and complexity. Colour management can also be tricky as the final colours often only develop at the end of the process. UV curing direct printing inks, on the other hand, although versatile and easy to use also on fabrics, are

generally not considered suitable for contact with human skin and can be prone to odour problems depending on a range of factors, including the textile substrate. So the choice between direct and transfer textile printing

remains the same as in any other digital printing segment: there is no “one size fits all” process available at present. •



T-Shirts.

	Dye sublimation	Toner Transfer	DTG	Water based textile direct	UV curing ink
Inks	Dye sublimation	Toner	Pigment ink	Direct disperse dye, acid ink, reactive ink	UV curing ink
Substrates	Polyester or polyester based	Apparel (typically cotton based)		- Direct disperse dye: polyester - Acid ink: wool, silk, Nylon - Reactive ink: cotton and natural fibres	Uncoated textile, rigid and flexible substrates
Workflow	Back to front printing on transfer paper, transfer by calendar	Back to front printing on transfer paper, transfer by heat press	Primer for dark textiles, fixation by heat press	Depending on the ink: primer, steaming, dry heat, washing	Direct to uncoated media
Advantages	Affordable printers available, versatility, suitable for soft signage and sports apparel and some home decoration	Affordable printers, small footprint, heat foil finishing available	Affordable printers available, versatile, small footprint	Suitable for fashion and home decoration, ink and substrates widely available on the global market	Simple process, no external fixation required, easy colour management
Disadvantages	Only for polyester based media	Garment only	Garment only	Complex workflows	Sometimes odour, curing problems on textile, not suitable for prolonged contact with human skin



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Modular software solutions and services from 'Pixel to Output'

Durst launches new P5 printing systems

By Ton Rombout



Durst, the manufacturer of advanced digital printing and production technologies, recently launched the new P5 350 and P5 210 printing systems for large format specialists based on the P5 technology platform. Durst also presented the P5 250 HS printing system unveiled in 2018, which has now been developed even further.

In addition to its new printing systems, Durst introduced its own modular software solutions - Durst Workflow, Durst Analytics and Durst Smart Shop - providing customers with an automated production unit from 'pixel to output'. The offering comes complete with consulting, training and integration services provided by Durst Professional Services.

Innovative technology platform

Christoph Gamper, CEO and Co-Owner of the Durst Group, commented as follows about this development: "P5 is Durst's innovative technology platform for large format specialists. In 2018 we set a new standard in print quality with the P5 250 HS. Meanwhile we have been

developing new solutions to streamline processes for our customers. At FESPA 2019 we will showcase the expanded Durst P5 portfolio with new hybrid printing systems, integrated workflow and analytics software, and optional expansion with prepress and web shop solutions."

P5 350/210 - the new versatility

The P5 350 is the all-in-one hybrid solution for flexible roll and board printing up to 3.5 m wide.

The P5 210 is the compact solution for flexible roll and board printing up to 2.1 m wide.

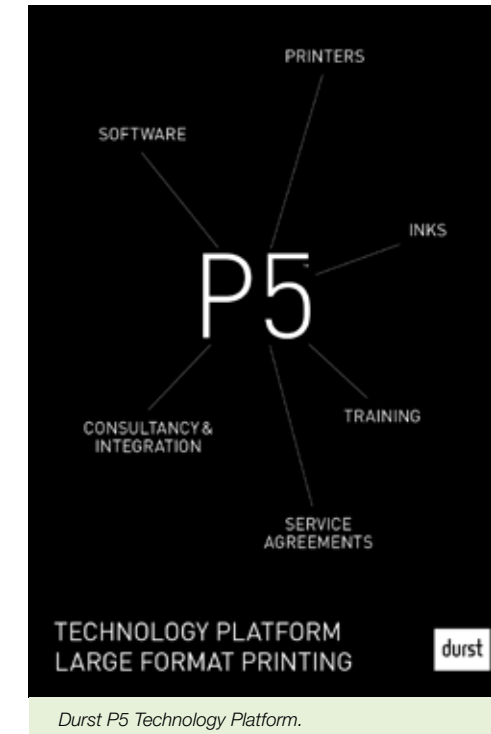
Durst is expanding its P5 portfolio with two new hybrid solutions in the shape of the P5 350 (print width up to 3.5 m) and P5 210 (print width up to 2.1 m). These innovative printing systems set a new standard in flexibility and versatility as they can print on both roll media and boards. With a unique multi-roll option for the P5 350/210, users can even load rolls during printing thus reducing set-up times and increasing efficiency. The printing systems are equipped with energy efficient LED technology and are supplied with integrated Durst



Workflow Print software and the Durst Analytics monitoring tool. Both systems offer the highest print quality of up to 1200 dpi, multi-track options for up to 6 parallel boards, automatic media width and thickness detection, foldable and smooth running roller tables and a secure ink refill system. They can also be equipped with peripheral systems for ¼ or full automation.

P5 250/200 HS - the new productivity

The P5 HS Series is the industrial solution for



printing widths of up to 250 cm. The printers are equipped with Durst Workflow Print software and the Durst Analytics monitoring tool.

The further development of the HS-Series means that the P5 portfolio offers two industrial printing systems accommodating print widths of up to 2.5 m. The P5 250 HS and P5 200 HS feature MEMS print head technology and with 5pl achieve the highest print quality at print speeds of up to 600 m²/h. The systems can also print on roll media and boards, and enable sensor controlled double-sided printing on roll media. They are supplied with integrated Durst Workflow Print software and the Durst Analytics monitoring tool. In addition to the highest print quality of up to 1,200 dpi, the printing systems incorporate dual-track options for boards, a secure ink refill system and they can be equipped with peripheral systems for ¼ or full automation.

P5 ink systems

Durst offers four ink systems for its P5 printing systems: Durst Rigid LED Ink, Durst Roll LED Ink, P5 Premium WG Ink and/or P5 POP HS Ink. They all benefit from a large colour gamut, high system stability, a wide variety of applications and low ink consumption. Durst Rigid LED Ink is designed for typical flatbed applications such as printing on paper, plastic hard foam board (e.g. Forex), soft foam board (e.g. Kapa), folding carton, corrugated board, coated metal (e.g. Alcan Dibond), acrylic, polycarbonate, polypropylene, rigid PVC and styrene. This ink set provides excellent surface resistance, stackability and low tack on rigid media, whilst closely resembling the established performance characteris-



tics of conventional Durst Premium WG Ink in terms of adhesion and/or colour gamut.

Durst Roll LED Ink

Durst Roll LED Ink is designed for typical roll-to-roll applications such as banners, blackback textiles, self-adhesive vinyls, fabrics, clear films and canvases. Optimized for use in P5 350, P5 210 and Rho 312/512 LED machines, this ink set has the same performance characteristics as conventional Durst Roll Inks in terms of flexibility, adhesion, colour gamut and gloss. In addition to these established performance characteristics, Durst Roll LED Ink is suitable for printing on thin and thermo sensitive media and is fully LED cured even in high speed printing modes. It also benefits from the advantages of LED technology in terms of reduced machine energy consumption and no ozone formation.

P5 Premium WG Ink

The universal P5 Premium WG Ink set is ideal when finishing a large number of different types of flatbed and roll media. This ink is particularly suitable, not only for standard materials such as paper or PVC, but also for media requiring high ink adhesion such as acrylic, polycarbonate and polypropylene. P5 POP HS Ink was developed specifically to produce high print volumes cost effectively on P5 200/250 HS machines. This high gloss ink makes it possible to eliminate additional finishing processes such as high gloss lamination, making the overall production process more efficient. Being a highly versatile ink, it can be used for printing on paper, Forex, dibond and styrene. Having a particularly large colour space and gloss finish makes this ink

suitable for a wide range of applications.

Durst software ecosystem

Durst offers dedicated ink systems for the P5 system covering a wide range of roll and flatbed applications. Durst's development approach, which includes in-house application and weathering tests, ensures maximum system stability. Ink systems and production batches are continuously monitored under the strictest laboratory conditions in order to guarantee optimum performance. All P5 printing systems are equipped with the new Durst Workflow Print production software solution and Durst Analytics monitoring tool. This changes the printer into a production unit from day one. Durst also offers a scalable solution for e-commerce integration with the Durst Smart Shop. Any Durst software can be modularly extended and managed via a web-based user interface.

Durst Workflow Print

A smart streamlined solution for print production management.

Durst Workflow Plus

Expansion with extensive PrePress functionality for fast and flexible data preparation.

Durst Analytics

A web-based monitoring tool that collects job statistics and relevant production data.

Durst Analytics Plus

Server based monitoring software to network multiple printing systems and integrate with production planning or ERP systems.

Durst Smart Shop

Web shop software providing calculation tools, realistic 3D previews and print specific product configurations.

Durst Smart Shop Plus

An extension incorporating an innovative graphical online editor. The Durst Smart Editor enables customers to create print layouts directly in the browser.

Consulting

The Durst Professional Services GmbH subsidiary offers customers extensive consulting, training and integration services focused on the new Durst software solutions aimed at unleashing the full potential of process automation and digitization. •

For more information visit:
www.durst-group.com/p5

Sign-Zone LLC acquires Promic Display Systems

A bright future ahead for Promic

By Ton Rombout



Promic is the European supplier of mobile presentation or so-called display systems. A brand, which from the outset has maintained that having a set of characteristics is paramount. The company is quality driven and focused on providing an excellent service. It invests in a strategic long term vision together with its customers, or as they put it 'their partners'.

That is why the company has seen such rapid growth. Over the past three years Promic has more than doubled in terms of staff, warehouse capacity and satisfied customers. Moreover, since the beginning of May even more progress has been made which soon will be resulting in a major expansion of its product range.



The Brightbox

If you were at the FESPA Global Printing Expo you may well have seen it already. The Brightbox is Promic's brand new version of the aluminium lightbox - a neat, lightweight frame that can hold Silicone Edge Graphics. The pre-assembled internal LED lighting creates a powerful backlit effect on the textile print. It is really easy to assemble and can be linked to other systems with its strong magnetic sides. With this new product Promic is really living up to its claim that it aims to deliver systems that perfectly match customers' demands and requirements. Rob Wijnen, Sales & Marketing Director: "With a handful of lightboxes already on the market, our customers were requesting a system that measures up to the Promic fundamentals: great quality, unique details,

reliable delivery and, most of all, an excellent service that is a given with every Promic order."

Several other new backlit systems

In addition to the Brightbox, Promic is introducing several other new backlit systems such as the Counter Impress, an addition to its SEG pop-up range. Rob Wijnen: "Similar to the Brightbox, we listened to our customers during the development stages of this counter. Obviously we can create a product in a way that we think works best, but our customers are the ones who really know. We aim to offer products that suit our customers', and their customers', needs. And where possible surpass these requirements."

New alliance

This expansion of the Promic product range is also an indication of what's to come. In May this year Promic Display Systems was acquired by Sign-Zone LLC, which means that from now on Promic is part of the Sign-Zone Group. This new combination will be the number one supplier of Mobile Display Systems to the Print & Sign Industry worldwide.

Extensive range of new products to come

Rob Wijnen: "Combining these two market leading companies will give us, and therefore our customers, increased access to a broad portfolio of products and services. This will mean that within a short time, we'll be able to introduce a wide range of new products into our assortment. Products that match our standards in quality and performance." Promic was not revealing very much just yet. Rob Wijnen: "All I can say is, keep a close eye on Promic. There are some really cool opportunities coming up!" •

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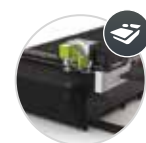
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Know-how and experience make all the difference

By Martin Kugler

Atelier Bruno is a leading installer of vehicle markings and vehicle wraps in France. Its head office and factory is located on a business park in Étoile-sur-Rhône, close to Valence in the Rhône valley. An ideal location to serve its customer base in a catchment area that covers most of south-eastern France. The company's client portfolio includes all major manufacturers of lorries, busses and vans, as well as operators and coach builders.

With more than 30 years experience, Atelier Bruno specialises in adhesive marking and signage mainly for commercial vehicles, which represent more than 80% of the company's operations. Atelier Bruno currently generates an annual turnover of 1.485 million euro.

Business strategy

The company's business strategy is built on innovative added-value design, solid hands-on experience and reliable quality. It offers full service solutions including design, material selection and production. The current site, comprising 1400m² of offices and workshops, was opened in 2002 and now employs 12 people. Bruno Fraisse, Managing Director of Atelier Bruno stated: "We have enjoyed tremendous commercial success in recent years with an average output of one vehicle a day, covering sizes from small vans to double-decker busses." Atelier Bruno processes approximately 18,000m² of digital printing vinyl and 6,000m² of coloured vinyl film annually. For corporate liveries we are able to offer custom colours supplied by Hexis to perfectly match any special colour scheme. We recently wrapped a complete fleet of overland busses in a colour that was not available off the shelf anywhere else in France."



Coloured vinyl stock at Atelier Bruno.



Bruno Fraisse, Managing Director at Atelier Bruno.



Applying a full wrap to a bus.

Preferred supplier

Atelier Bruno's machine fleet includes cutting plotters and three wide format inkjet printers: two 74 inch wide Seiko H2-74S printers and a 64 inch wide Epson SureColor S80600 printer, making it possible to print directly on most vinyl substrates.

To satisfy customer demand Atelier Bruno retains a permanent stock of more than 120 colours of cast and polymeric high performance vinyl, in addition to 600m² of assorted digital printing media on rolls. The French manufacturer Hexis is the company's preferred supplier. Bruno Fraisse commented: "To achieve quick turnarounds and meet our customers' tight deadlines we need vinyl films that we know are perfectly suitable for our applications and we rely on the responsiveness of our supplier. Price is not necessarily the decisive factor when making a choice."

Wide range of vinyl media

For its marking and wrap installations Atelier Bruno uses a large number of different products from Hexis' wide range of vinyl media, covering both calendered high performance film and advanced cast vinyls with structured adhesives for complex surfaces. Because of the high level of direct customer support, Hexis products have gradually replaced those of numerous competitors. Indeed, Hexis is the only manufacturer able to offer sound advice and technical competence quickly and effectively. Bruno Fraisse added: "We appreciate the technical and personal proximity that Hexis offers, knowing that issues are dealt with immediately and with the necessary skill."

Varnishing tunnel

Atelier Bruno is justifiably proud of its vast 20m long varnishing tunnel, which is used to apply liquid laminates to UV protect media intended for outdoor applications. The special varnish, which matches the properties and flexibility of the vinyl film, provides long term protection for vehicle wraps and signage.

Specialist training

Employees at Atelier Bruno receive specialist training at least once a year to keep them au fait with the latest installation techniques and advances in media technology. The Hexis Training Center provides training sessions at different levels, from basic to advanced, covering all aspects including specific application techniques and any necessary tools and accessories. Guided by highly skilled and experienced professional trainers, participants are introduced to the practical details of surface preparation, stretching, memory effect, correct heating and post-install finishing.

Ambitions for the future

Bruno Fraisse has high ambitions for the future: "Going forward we aim to further improve what we offer to the automotive industry by providing advanced solutions, such as even better UV resistance on commercial vehicles." •

www.atelier-bruno.fr

www.hexis-graphics.com



20m spray tunnel for UV laminates.



Combined digital print and cut vinyl.

Stora Enso focuses on increased environmental investment

TreeToTextile with H&M and Inter IKEA groups

By Ton Rombout



Wood fibre straws.



Straws and wood chips compared.

On 14 December 2018 the paper producer Stora Enso announced that it intends to invest 22 million euro in the expansion of its existing water treatment plant at Skoghall Mill in Sweden. Increased capacity and new, modern technology is set to upgrade the water treatment process at the mill, reducing the environmental impact of its operations and helping to meet future environmental requirements.

Before looking at this in more detail, we would first like to mention that on 21 December 2018, one week later, Stora Enso also announced that it was going into partnership with the H&M and Inter IKEA groups in order to industrialize TreeToTextile. The latter was set up as a joint venture between the H&M group, the Inter IKEA group and the innovator Lars Stigsson in 2014 with the aim of developing new textile fibres sustainably and cost effectively. Just before Christmas 2018, TreeToTextile announced that Stora Enso was joining this partnership and supporting the industrialization of TreeToTextile's production process by setting up a demonstration plant at one of its Nordic facilities.

Expansion of the existing water treatment plant at Skoghall Mill

Water used in the production of cartons is left with a residue of small particles of wood fibre. The expansion of the plant makes it possible to improve the separation of sludge, which in turn benefits the quality of the water that is returned to Lake Vänern nearby. The sludge can also be

used as biofuel.

"We always strive to use as much of the wood as possible, find new uses for our by-products and minimise our environmental footprint," stated Margareta Sandström, Environmental Manager at the Skoghall Mill.

The project consists of three larger pools to promote more efficient sedimentation, along with associated process and control systems. Work is due to start immediately and expected to continue until early 2020.

"This is another example of an environmentally sustainable investment which, even at start-up level, has a direct positive impact. It's also a key element of the continued development of the Skoghall Mill," commented Hans Olsson, Head of Technology and Investments at Skoghall Mill.

Stora Enso new partner of TreeToTextile

The four partners have an equal stake in TreeToTextile and share the belief that there is definitely a market for a fibre with a good sustainability performance and attractive cost. "With support from our new partner Stora Enso, we are now entering an industrialization phase. The new fibre we have developed is both sustainable and produced at a lower cost," stated Annica Karlsson, Chair of the board of TreeToTextile AB.

TreeToTextile's process uses renewable raw material from the forest and regenerates the cellulose into a textile fibre. This production process uses less energy and fewer chemicals, making it a much more sustainable and cost effective process compared to conventional



Straws in a cup.

technologies and fibres.

The technology, which has been tested on a pilot line in Sweden, is now ready to be scaled up with the construction of a demonstration plant at one of Stora Enso's Nordic facilities. Even though the Inter IKEA group and H&M group plan to use the fibre in their products, it is hoped that the entire industry will benefit from this sustainable fibre since it can be used in conventional supply chains.

More sustainable textile production for more companies

"We're very happy to join this partnership and contribute to a more sustainable textile production process. Stora Enso produces dissolving pulp for textiles based on renewable and fully traceable wood from sustainably managed forests. It will be exciting to participate in the industrialization of this technology at one of our

Stora Enso and CDP targets

Being part of the bioeconomy, Stora Enso is a leading global provider of renewable solutions in packaging, biomaterials, wooden structures and paper. It believes that it will be possible to make anything made from fossil based materials today from a tree tomorrow. Stora Enso has some 26,000 employees spread across more than 30 countries. It clocked up 10 billion euro in sales in 2017. Stora Enso has been top rated in the fight against global warming by the international non-profit organisation CDP, which endeavours to build a sustainable global economy. CDP has included Stora Enso in its new 2018 Climate A List, which identifies global companies that are taking the lead in climate action.

For more than a decade Stora Enso has been proactively reducing the energy intensity of its operations and its dependence on fossil fuels. In December 2017 Stora Enso became the first forest products company to set ambitious science-based targets to reduce greenhouse gas emissions throughout its value chain.

Stora Enso has also signed up to a Revolving Credit Facility (RCF) loan, in which part of the

pricing is based on the group's performance in reducing greenhouse gas emissions.

"Ultimately, it is our renewable materials that make a difference. They are a key solution to combating global warming as they store carbon and replace fossil based materials,"

stated Paul Simpson, CEO of CDP

CDP is an international non-profit organisation, which encourages companies and governments to reduce their greenhouse gas emissions, safeguard water resources and protect forests. Voted the number one climate research provider by investors and working with institutional investors with assets of US\$87 trillion, it leverages investor and buyer power to motivate companies to disclose and manage their environmental impact. In excess of 7,000 companies with more than 50% global market capitalization disclosed environmental data via CDP in 2018. This is in addition to more than 750 cities, states and regions who disclosed, making CDP's platform one of the richest sources of information globally on how companies and governments are driving environmental change.

facilities in order to meet the growing demand," commented Markus Mannström, EVP of the Stora Enso Biomaterials division.

"We welcome Stora Enso to this partnership. For us, TreeToTextile is a long term investment as we strongly believe it will help us offer our customers even more sustainably produced products at affordable prices," stated Erik Karlsson, Investment Manager for Sustainable Fashion at the H&M group's investment arm CO:LAB.

"With Stora Enso as a partner we now add industrial knowledge and specific expertise within the cellulose field. The combination of existing consumer/textile knowledge and an entrepreneurial spirit brings us one step closer to our goal, which is to introduce a new sustainable low cost fibre for the benefit of the many people," said Lena Julle, Category Area Manager Textiles at IKEA Sweden.

"It's great to see how the idea of utilizing forest resources for a more sustainable textile has developed from the lab stage to a commercially viable product in just a few years," the inventor and entrepreneur Lars Stigsson added. •



Straws and a mojito.



Stora Enso – 2018 Industry Leader in sustainability.

Stora Enso announces six Accelerator Programme start-ups

Stora Enso has chosen six start-ups to join its second Accelerator Programme, a joint start-up initiative organised by Stora Enso, Aalto University Developing Entrepreneurship (Aalto ENT) and Vertical Accelerator. The Accelerator programme provides an exceptional opportunity for disruptive start-ups and Stora Enso to actively ideate and innovate new solutions. This year's programme focuses specifically on the circular economy, especially with respect to circular solutions, raw material management, packaging, separation and sorting, and energy.



Tree to Textile logo.



Straws and a smoothie.



IKEA production.



Stora Enso will extend its biocomposites raw material base at the Hytte Mill in Sweden to provide more choice in technical properties and range of fibres.



The Stora Enso Oulu mill in Finland

The start-ups invited to join the 2019 Accelerator Programme are:

Effa <http://effabrush.com>
RePack <https://www.originalrepack.com>
Alucha <http://www.alucha.com>
Bloom <http://www.bloombiorenewables.com>
MiWa <http://www.miwa.eu>
SFTec <https://www.sftec.fi>

Over the next few months, they will work side by side with Stora Enso participants, delving into and advancing know-how, capabilities, technologies and market opportunities. Co-location will take place at Vertical accelerator, one of the largest and most prominent start-up communities in Finland.

Sustainable fashion starts at the production stage

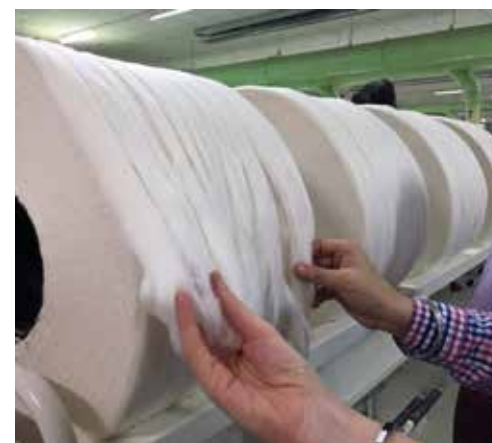
How does the H&M brand approach sustainability?

By Ton Rombout



Conscious also with regard to working circumstances.

industry is a particularly challenging task and not something we can achieve on our own. That is why we are working in partnership with other businesses across the globe, to really make a difference. This statement aims to explain how we approach sustainability at the present time."



Production of more sustainable cotton is important.

The H&M group also needs to have a proactive approach to sustainability nowadays. Similar to other contemporary brands, buyers of clothes and other textile products are looking more carefully at what is sold in their stores with a particular focus on sustainable production.

Sustainability is an umbrella concept that covers issues such as whether clothing or inks contain toxins and whether the production process involved child labour or other inhumane working conditions.

H&M group statements

The H&M group states that it wants to continue making great fashion and design affordable by having a circular approach and being a fair and equal opportunity employer.

Anna Gedda, Head of Sustainability at H&M, commented as follows: "The fashion industry is the second largest industry in the world and we consequently also have a significant responsibility in helping to protect the environment. However, turning fashion into a greener



H&M Key achievements.



H&M-textile factory.



Cotton-drying-factory.

More than just organic cotton

"Many people identify sustainable fashion as fashion that is simply made from sustainable materials. However, our responsibility goes beyond this, across our entire value chain. We impose stringent demands upon our suppliers, which include both social and environmental regulations, in accordance with our code of conduct or Sustainability Commitment. Being a global brand comes with a lot of responsibility, which we consider of paramount importance within all our processes and markets."

We are all part of it

She continued: "We want to use our influence to introduce systematic change to the industry

and across the lifecycle of our products.

Joining forces with our colleagues, customers, stakeholders, business partners and peers - we can do it. We can achieve this in many different ways, from improving the livelihood of cotton farmers to encouraging our customers to recycle their clothes via our garment recycling scheme.

We want our customers to be proud of what they wear. Not just about how good they look, but also about the way the clothes are made and the environmental and social impact of the garments across our value chain.

Today sustainable fashion goes way beyond organic cotton tees. We offer many sustainable basic fashion pieces, trendy tops and striking evening wear throughout the year. H&M also

launches a conscious exclusive collection every year, which comprises high end environmentally friendly pieces aimed at achieving a more sustainable fashion future. We are committed to demonstrating that sustainable fashion has a place on the red carpet and is part of what we offer in our stores on a daily basis. One of our goals is to ensure that all the cotton used in our range will be sustainably sourced by 2020."

Sustainability summary 2017

Interested in what H&M does in terms of sustainability? The annual sustainability report provides all the information you need to gain a more comprehensive insight into the company's sustainability efforts, its commitments and its progress to date. Through its activities and initiatives it aims to become a catalyst for change across the entire fashion and design industry.

Anna Gedda: "A company of our size and scale has a responsibility as well as a great opportunity to direct this change towards a more sustainable fashion and design industry."

Key 2017 achievements

Innovation is the key to achieving full circularity, which is why we are supporting pioneering companies such as RE:NEWCELL, Worn Again and TreToTextile.

We have managed to reduce emissions from our own operations by a further 21%, which takes us another step closer to achieving a climate positive value chain by 2040.

All of the factories we work with in Bangladesh have now conducted democratic elections to appoint worker representatives.

By 2030 we will only use 100% recycled or other sustainably sourced materials.

Our supplier list includes the details of tier 1 factories for 98.5 % of our products and tier 2 factories for 60 % of our products. •



Control of the final product.

Digital cutting accuracy for soft signage

Esko launches Motorized Roll Feeder

By Ton Rombout

Recognizing that there is need for greater flexibility, efficiency and accuracy in the operations of sign and display producers nowadays, Esko is launching two new hardware solutions: a Motorized Roll Feeder for soft signage applications and the Kongsberg C Edge, the upgradable digital cutting table, plus the latest version of its integrated software range Esko Software Platform 18.1.

The Motorized Roll Feeder is the only solution in the soft signage industry that delivers great cutting results on tensile materials, from the very first cut through to the end of the roll. Eliminating inaccurate cuts on soft signage jobs due to wrinkles, stretch distortion or imperfectly rewound rolls, the new Motorized Roll Feeder incorporates an active material feed, which prevents stretch by actively feeding, rather than pulling, the material onto the Kongsberg C64 digital cutting table.

How does it work?

The new Motorized Roll Feeder incorporates an active material feed, which eliminates inaccurate cuts on soft signage jobs caused by wrinkles, stretch distortion or imperfectly rewound rolls. Stretch is prevented by actively feeding, rather than pulling, the material onto



Close up impression of the MRF.

the cutting table. A dancer bar provides the correct tension with adjustable weights and an active edge correction maintains a steady straight feed, even if the roll is imperfectly rewound after printing. A spreader roll is incorporated as a final checkpoint to smooth out any remaining wrinkles, ensuring precise finishing on soft signage jobs. The combination of the Motorized Roll Feeder and built-in Esko Kongsberg software cleverly compensates for any distortion during cutting. A software algorithm determines the exact cut size, taking into account material properties for shrink, stretch or melting during the print stage, or alternatively, the operator can decide to follow what was printed.

Precise cutting on tensile materials

Russell Weller, Esko Product Manager, stated: "This is the only solution in the soft signage industry that delivers accurate cutting results on tensile materials, from the very first cut through to the end of the roll. A perfect feed enables our customers to deliver flawless products, avoid waste/rework and boost efficiency. The Motorized Roll Feeder is available and, when used in combination with the Take-Up Unit, delivers the only true roll-to-roll production on the market today."

Symbiosis between speed and accuracy

The Motorized Roll Feeder handles large rolls enabling wide format converters to keep up with their digital printing capacity. Large jobs in high volumes, long print runs and dense materials such as PVC require a solution that can easily handle heavy rolls. The new Motorized Roll Feeder will accommodate rolls up to 300kg/666lbs with a maximum external diameter of 470mm/18.5", producing large jobs even when they extend beyond the work area of the cutting table. Typically, when jobs are larger than the table, a shift in the cutting edge creates a joint where the job is interrupted and then resumed. The Motorized Roll Feeder, used in combination with a conveyor belt and Esko software to manage the job, now eliminates this stage.

Unlock Extra Production Power

The recent new addition of the Fast Tool Adapter for the Kongsberg tables adds even more production power to the Motorized Roll Feeder set up. Eliminating the need for tool changes, the adapter enables faster throughout and improves out quality, especially on soft signage materials, like vinyl. •



The ESKO Multi Roll Feeder in full action.

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Digital Signage for Outdoor on the move

By Loet van Bergen

Together with Exterion Media, IAB (Interactive Advertising Bureau) held a joint breakfast session on the subject of Digital Out-Of-Home on 15 November last year. The aim was to exchange ideas about recent developments in Digital Out-of-Home (DOOH). The 170 attendees received a comprehensive update from the IAB DOOH Taskforce, including details on a number of inspiring cases such as the launch of the Galaxy S9 and the American Express DOOH campaign.

The prospects for (D)OOH are good. Together with online video it is a growth market in spending. GroupM recently revealed. Digital Out-Of-Home increased by 6% in 2018 and a growth of 3% is expected for 2019. DOOH is in a rapidly changing, growing ecosystem and now accounts for more than a third of spending in the Out-Of-Home sector.

DOOH global growth

Worldwide the Out-Of-Home market will continue to grow by 3.9% annually, mainly due

to the growth of DOOH. It is expected that by 2022 more than 38.5 billion euro will be converted worldwide in the OOH sector, of which just under half will be 'digital'. Moreover, economic growth and the increase in consumer activity and mobility will ensure that more consumers will view DOOH campaigns. This obviously presents great opportunities for DOOH companies.

Programmatic buying

The integration of online promotion activities shown on physical screens ("programmatic selling and buying") contributes to the popularity of DOOH advertisements, which completes the picture in terms of promising preconditions for (D)OOH. An analysis by the consultancy firm PWC shows that growth in DOOH is set to continue over the coming years, but at the expense of (static) OOH.

Exterion already announced that due to falling revenues and sky-high operating and precision costs, it would no longer offer billboards. By 2019, 40% of the current expenditure on OOH will have been capitalized by DOOH. Media



DOOH in the shopping centre.



DOOH explanation presented by a Google expert.

agencies have already announced that they want 50% of the advertising budgets spent on DOOH in 2018, because it offers price advantages for advertisers and increases efficiency.

Obstacles

Everyone, from advertisers to operators, is positive about the potential of DOOH. Nevertheless, Hein Asser, Contracting Director print and out of home at Magna, does envisage obstacles that could slow down expected growth and eliminate the favourable framework conditions. He commented: "The entire commercial market wants to accelerate digitization, but the speed is determined by the weakest link, i.e. permits, concessions, administrative procedures and conflicting social agendas."

Another potential problem is opposition to programmatic buying from existing operators and media buying agencies. OOH operators fear loss of revenue due to falling prices per screen. These agencies are afraid that their costs will



Online choice means more choice, faster decisions.



Moving things means more fun and better buying.

increase because they lose control of the purchasing process. However, according to Asser programmatic buying and selling is part of the future. Campaigns can easily be changed this way in a flexible manner. For example, if it appears that the target group is not being reached, scrolling in broadcast times and places with programmatic is very simple. Aaron Spijkers, programmatic lead at media agency Kinetic Worldwide, also believes that DOOH has great potential and that programmatic can play a substantial role in this. More than 70% of DOOH can already be purchased programmatically.

Developments

DOOH is on the road to maturity and will continue to develop mainly through the use of innovative technology, including programmatic. There are still plenty of opportunities when it comes to making connections and combina-

tions with online platforms. There are examples where a sophisticated media mix of OOH, television and print generated an extra benefit in excess of 3%. By making it more flexible (giving readers the opportunity to have their story told at the right time, in the right location and aimed at a specific target group), adding valuable data to propositions, mapping consumer movements via GPS and capturing how many consumers have actually viewed, e.g. through eye tracking research, the value and relevance of the DOOH medium will increase considerably.

And there's more, which has everything to do with the ground-breaking popularity and intensive use of the smartphone. This makes it possible to take it a step further with the medium by generating interaction between digital screens and 'mobile only' passers-by. Scan a code, make contact with Bluetooth via an app or check a URL and receive information about products and services, offers, discount vouchers, etc. Offline and online merge seamlessly here and offer advertisers the opportunity to target audiences with great accuracy and maximum impact. All in all, the key phrases of DOOH are personalization, interaction and activation.

Future

"Despite the promising nature of DOOH, there is still a lot of work to be done," said Meindert van den Heuvel, Interbest Director and Chairman of the DOOH Taskforce at IAB. He was the first to mention standardization. For example, there are more than 8,000 different formats in Out-of-

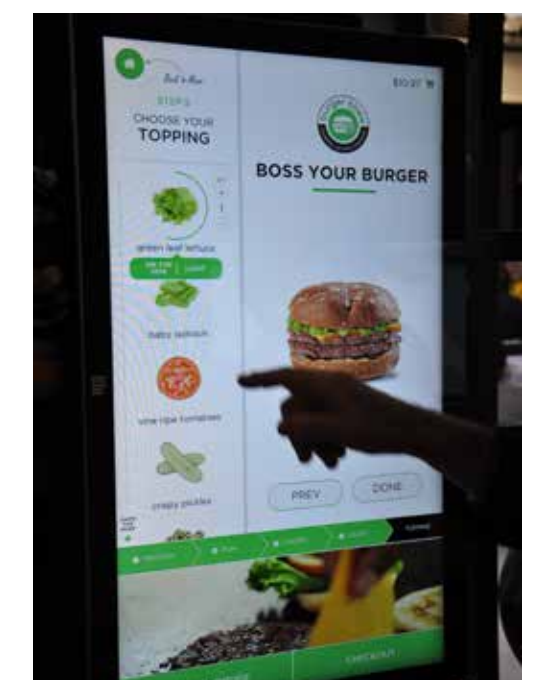
Home. He feels that this is extremely inconvenient for creative agencies that have to work with many different layouts. So rules are needed about what an advertisement should comply with. The wait is, for example, for HTML5 where you can bring much more dynamic content. Similar to the recommendations of the IAB, this will also help the industry in the developments around Digital Out-of-Home. The next question relates to understanding the possibilities. "We need to tell everyone much more about what is possible. There are many inspiring cases, but with a medium in development you have to promote it more yourself."

The third question is impact. Not everything is acceptable, there are rules. The approach of a municipality determines a lot. Not every municipality is eagerly awaiting digital screens. Guy Grimmelt, Marketing Director at Exterion Media, thinks that DOOH needs more time. "It is still a fairly young medium. Fortunately we have learnt a lot from what happened with other media. Finally, the price model is obviously important for advertisers. At this point in time there still are several payment models. Could we not make an analogy with the online world, where you have CPM, viewable CPM and cost per click?"

Finally, we also need uniformity in data sources. According to Spijkers, a great deal is possible with DOOH with a creative approach. "As a sector we continue to view DOOH as a poster with images that remain the same throughout the week." What's next? One thing is clear: operators and advertisers will have to join forces to face the challenge in order to put DOOH on the map as an adult medium. Meanwhile, the first step has been taken: on 18 December the Taskforce presented a handbook with recommendations to help the market move forward. •



Printing on glass.



Boss your Burger, choose your topping.

Elitron continues to drive innovation

AGILA – the latest compact and creative cutting plotter

By Ton Rombout



The new Agila system.

Back in April at the Sign Expo in Budapest (Hungary) Elitron released a new, advanced multi-tool cutting head for dynamic production and sampling, for all visual communication and packaging requirements.

AGILA, the latest compact and creative cutting plotter, makes tool changes quicker than ever before. AGILA also supports Elitron's innovative plug & play wire-free connectivity for instant tool changeover.

How does it work?

You simply slot in the required tools without connecting any wires and start work immediately. When you need to change jobs you simply unplug the tool and slot in a new one. It is the fastest tool change option available today.

Robust work area

Similar to all other Elitron systems, AGILA comes with a robust cellular steel work area, with a 16.13 m or 8.13 m vacuum work area. Elitron's Seeker System, for reference point recognition

to speed up the production process, is optional.

Klick

The company's new Pre-Print Automation software is marketed under the brand name Klick. It is Elitron's latest innovative solution, developed specifically to automate the pre-printing operation process. Klick can be interfaced with all printers in order to speed up the printing process, reduce ink waste, keep the printing bed clean and allow the reuse of otherwise leftover materials.

Different Klicks

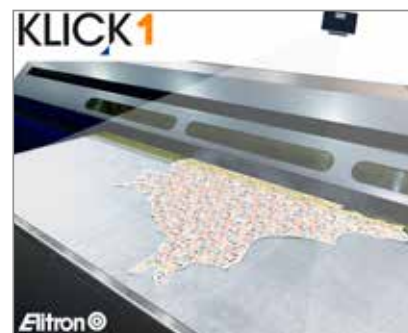
Klick 1 is intended for Texture printing. It recognises the perimeter of the material(s) freely placed on the print bed, so that the printer only prints the design/texture within the

Elitron

The company currently has more than 2500 installations in more than 50 countries and holds 12 patents. Elitron is a global standard-bearer in the production of Cutting Plotters, CAD design software and automation solutions - a company boasting 100% 'Made in Italy' throughout its entire production process. In many cases the innovative solutions and technologies are backed by exclusive Elitron patents. They exceed the limits of traditional production systems, automating the workflow and generating new business opportunities for Elitron users.

Elitron now produces industrial cutting systems, software and automation solutions for many different sectors, e.g. footwear, leather goods, furniture, automotive, visual communication, packaging, gaskets, composites, rubber and foam.

perimeter of the identified material(s). Klick 2 is intended for Material printing. It recognises the perimeter of the material(s) freely placed on the print bed and nests the shapes manually or automatically using video projection, within the perimeter of the identified material(s). The shapes are then automatically perfectly paired with the images to be printed. Klick 3 is intended for material and object printing. It recognizes the perimeter of the material(s) and object(s) freely placed anywhere on the print bed and identifies the shapes to be printed. These are then automatically perfectly paired with the images to be printed. •



The Elitron Klick software system for easy positioning.



To give customers a unique user experience

Caldera announces new Customer Success Plan

By Ton Rombout



Caldera Success Customer Plan.



Caldera Success Customer Plan-logo.

Leading RIP software house Caldera has this week announced the launch of a new Customer Success Plan. The aim of the initiative is to give CalderaCare customers a unique user experience that will onboard and welcome them into the Caldera user-base community.

It will also open channels of communication between Caldera and new customers, enabling the company to explain how they can work together and to hear what their clients think and feel about the Caldera experience.

Customer Success Plan

As well as enabling users to get the maximum value out of their Caldera products and

services, the Customer Success Plan should prove a valuable tool which the company can use to improve the customer experience, reduce early calls to support and to generate interest in CalderaCare webinars and onsite training. The initial format of the Customer Success Plan will be a one-hour presentation that will act as an onboarding event for new customers.

Caldera Support

The Success Plan presentation will explain how customers can contact Caldera support, either by using the support form, live chat or by phone, and it will also present the different service levels available to CalderaCare members. Users will be given an overview of Workspace, with instructions on driver selection, and will be made aware of a range of further training options on Caldera products, including webinars, on-site training or sessions at Caldera HQ, as well as the company's extensive library of how-to videos. Caldera-Dock and CalderaDesk are also included in the presentation, which finishes by running through the Caldera set-up basics.

Best user experience

According to Sébastien Hanssens, Caldera's Vice President of Marketing and Communications, "By launching this new Customer Success Plan, we're focusing on providing our customers with the best user experience. We wanted to find a way of welcoming them onboard and to tell them about our products and services, and how we can work with them to ensure that they gain the maximum value out of the Caldera experience. As always, our mission as a company is to build relationships with our customers that go above-and-beyond customer service."

The first stage of the Caldera Customer Success Plan will be going live at the end of May and is live when this issue of SignPro Europe is published and distributed. •

Contact:
www.caldera.com
Sébastien Hanssens
Vice President Marketing & Communication

Fashion label Marine Layer leads the way

T-shirt recycling is here and it could transform fashion

By Ton Rombout



ReSpun-recycling program.



Michael Natenshon, founder and CEO of Marine Layer.

I recently came across an article by Elizabeth Segrán about the Marine Layer fashion brand. She explained how Michael Natenshon, founder and CEO of Marine Layer - a San Francisco based fashion label best known for its soft T-shirts, came up with a brilliant idea: “There’s a kind of poetry in knowing that your T-shirt was reincarnated from another T-shirt.”

This reality may now be around the corner thanks to brands such as Marine Layer and other factories that have quietly been working on designing a new system of fabric recycling, even though it involves a fairly difficult process. Marine Layer recently launched a new collection of men’s and women’s T-shirts, referred to as Re-Spun and made of up of 50% recycled cotton T-shirts and 50% other sustainably sourced recycled and virgin fibres. The brand joined forces with a textile factory in Alicante (Spain) working on a new recycling technique that requires no chemicals, dyes or even water and partnered with a Spanish factory to turn old T-shirts into new shirts, to prevent them from ending up in landfill.

Recycling different materials

Over the past few decades, engineers have perfected the art of recycling different materials, from plastic to paper and aluminium, making it possible to ‘reincarnate’ old products into new versions of that very same product.

“I’m looking forward to the day when it is normal to return your favourite old T-shirt to a store and then pick up a recycled shirt made from other people’s favourite old shirts. The day after my girlfriend threw away my favourite shirt I started working on Marine Layer...” - Michael Natenshon

However, until recently there has not been a satisfactory method to recycle clothing into new garments. Modern clothes are made of complex textile blends that include both natural and synthetic fibres. They are difficult to break down because plastic based nylons and polyesters only melt at high temperatures. Moreover, for much of the past century clothes were considered durable rather than disposable goods, so recycling clothes seemed less pressing than recycling plastic bottles for example. Fast fashion, however, made clothes so cheap that many consumers now consider them disposable. 100 billion items of clothing are churned out every year. They may circulate in the economy for a while – perhaps being resold in a second hand store or donated – but then they end up in landfill. The average American throws out 80 pounds of textiles every year. Since most clothes contain some



My favourite Disney shirt, from the flea market.

synthetic fibres that are not biodegradable, they will remain in landfill sites forever.

Recycling is more difficult than you think

To the customer the process of recycling T-shirts seems deceptively simple. You send in an old T-shirt and it gets transformed into another T-shirt. In practice, however, the process is more complicated. In the case of Marine Layer, the company first had to gather old T-shirts, 75,000 to be exact. During Black Friday week in 2018 Marine Layer put out a call asking customers and the general public to drop off their old T-shirts in store or using pre-paid mailing envelopes, in exchange for up to \$25 store credit. The company needed 10,000 T-shirts to launch its first collection, but received far more than it expected.

Manufacturer

Two years before that call went out, Marine Layer’s production team spent months scouring the market for a manufacturer with the capability to recycle T-shirts. Whereas Natenshon was open to using recycled plastic – and ended up using recycled plastic bottles as part of the Re-Spun fabric blend – he really wanted to incorporate fibres from old T-shirts into the line. This would help create a circular system with the T-shirt line. “The fast fashion industry has generated so much textile waste,” he commented. “The biggest problem we have right now is keeping that stuff out of landfill. We thought the most meaningful way for the customer to close the loop was to contribute to the recycling process.”

Recover discovered

In the spring of 2017 the Marine Layer team discovered Recover, a Spanish factory that has found a way to break down textiles and re-spin the fibres into new yarns. It was founded by a Spanish family in 1947 and has been working for decades to develop this particular fabric recycling technique. Recover is well known in the industry for its commitment to sustainability. It runs on solar energy and is certified by several third party organizations, including the Global Recycled Standard, which verifies that recycled content is present in products and ensures responsible production. Most clothes today are made up of fabric blends (such as cotton mixed with nylon), but Recover has figured out how to break down fabric blends, separate the different fibres and extract the cotton to recycle it. Recover is careful to keep the length of the fibres as long as possible during the shredding process, because longer cotton fibres create high quality cloth that is more resistant to pilling. Still, this recycled cotton is not as strong as virgin fibres. So Recover strengthens the cotton by weaving



ReSpun Mini-shirts.



Handmade sounds.



All about music.

it with other fibres that are also sustainably sourced, including organic cotton, hemp, recycled water bottles or recycled nylons.

Unique solution

There are a few unique elements in the Recover process. One relates to the fact that Recover separates fibres by colour and then, using a proprietary colour matching process, recreates each colour. This means that the process doesn’t require chemicals or dyes that are often toxic. Marine Layer’s Re-Spun T-shirt line has many colourful patterns, which requires many T-shirts of each colour. “What we found is that the colour is not as consistent as it would be if we gave the factory a Pantone colour card and asked them to just create a match,” Natenshon explained. “But we kind of like the fact that there are variations in colour, giving each batch soul and character.” The other unusual aspect of the process is that it doesn’t require any water. Recover doesn’t even use water to clean the old clothes. They

are industrially cleaned using ultraviolet rays at fibre level. According to a study by the University of Valencia, on the other hand, one kilogram (or 2.2 pounds) of virgin cotton requires 15,000 litres of water to be turned into fabric, including farming, processing and dyeing.

Getting the customer on board

The Recover factory can process virtually any garment to recoup the fibres within. Marine Layer wanted to focus first and foremost on T-shirts, partly because that is what the company is best known for. Natenshon realized that much of this first collection was about introducing consumers to the concept of a circular system for the production of T-shirts and, perhaps more broadly, all other garments. There was also a practical reason to get customers interested in T-shirt recycling. With the Re-Spun collection Marine Layer relied on customers to provide the raw material, so it was important to make them feel that they had a vested interest in the process. A smart insight, as consumers are increasingly concerned about what’s happening to the planet and looking for ways to reduce their environmental footprint. A few months in Marine Layer has collected 75,000 shirts, with more arriving every day, which opens up new possibilities. Natenshon stated that 40% of these shirts are coming from people who had never previously purchased from Marine Layer, i.e. a side effect of the Re-Spun programme is that it is introducing new people to the brand. “There are more than enough old T-shirts destined for landfill to fuel this program,” Natenshon added. “It’s just about getting people to send them in. People’s old shirts can have a nostalgic value and now there’s a way to give them a new life.” •

First Global Showing of New Hybrid Textile Printer

Mimaki shows latest textile technology at ITMA

By Ton Rombout

At ITMA 2019 Mimaki will show a new textile printer delivering unparalleled flexibility and unprecedented application capabilities.

Furthermore Mimaki will showcase a wealth of technological breakthroughs and creative opportunities to drive digital print adoption in textiles.

New hybrid digital textile printer

This will include the first global showing of a brand-new hybrid digital textile printer, uniquely featuring both direct-to-textile and direct-to-transfer print capabilities. These features enable textile and garment manufacturers to achieve more flexibility. The new Mimaki printer also allows multiple sets of inks to be loaded simultaneously.

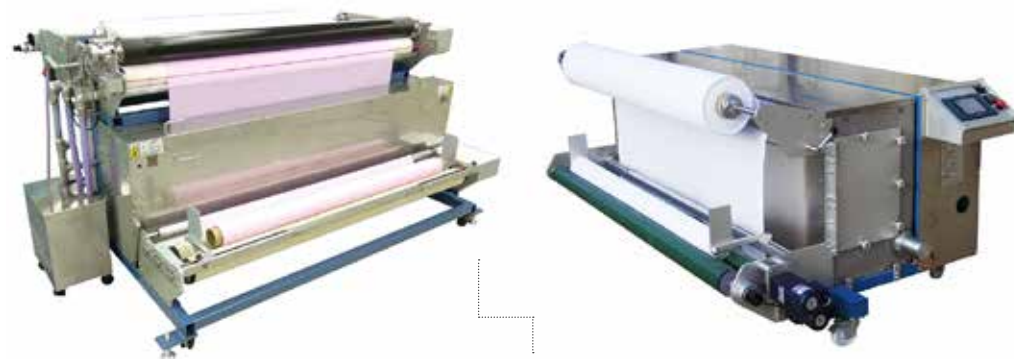
Mimaki will also give a preview of its new TA Job Controller software, specifically designed for textile production environments. For use on Mimaki's Tiger Pro Series and Rimslow TR Series – and all Mimaki textile printers –, TA Job Controller enables users to connect one-on-one to the RIP and other devices, for an automated workflow from design to pre-print, print and post print processes.

Mimaki Tiger-1800B MkII

A not-to-be-missed highlight on the Mimaki booth (H3-B110), visitors will also see the company's flagship industrial digital textile printer, the Mimaki Tiger-1800B MkII – in dye-sublimation configuration. Combining Mimaki's Japanese expertise in electronics with La Meccanica's know-how in building solid and robust belt printer bodies with 'made-in-Italy' design, the Tiger-1800B MkII – the latest model of Tiger-1800B Series – enables users to produce high-quality products (up to 1200 x 1200 dpi resolution) at up to 385m²/h print speed, without the need to compromise on production and throughput.

Coating and steaming machines

From its advanced TR series, Mimaki will also show the TR300-1850C coating machine and the TR300-1850S steaming machine, and the benefits of a total solution for textile print production. Providing the equipment needed to



The Mimaki TR300-1850C (coating machine) [Left] and TR300-1850S (steaming machine).

operate the entire digital textile workflow, Mimaki's all in on solution ensures complete technology compatibility, as well as increased productivity, print quality and reduced production costs.

Mimaki will also use ITMA 2019 to showcase its wide range of flagship solutions addressing different textile market segments. These include: Mimaki TS55-1800: A dye-sublimation business-enhancing printer, Mimaki UCJV300-160: A roll-to-roll UV LED inkjet integrated printer/cutter, featuring a white ink capability.

This array of technological breakthroughs represents only one side of Mimaki's commitment to the textile industry. At ITMA 2019, the company will also demonstrate its cooperation with world-renowned designers who are driving innovation with cutting-edge and inspirational printed textile applications. As part of this approach, Dutch retail fashion designer, Tessa Koops, will use the show to demonstrate the power of Mimaki digital print technology for increased creativity, personalisation and profitability within the fashion industry.

Discover Mimaki's broad digital textile portfolio during the company's press conference at



At ITMA 2019, Mimaki will collaborate with Dutch fashion designer Tessa Koops.



The Mimaki Tiger-1800B MkII, Combining Mimaki's Japanese expertise in electronics with La Meccanica's know-how in textile printing.

ITMA 2019, Thursday June 20th, 14:00 – 15:00, CC1 – Meeting Room 1.4, Fira de Barcelona. •

More info: www.mimakieurope.com

Textile



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- ¹ Glossiest white on transparent and colored media. Glossiest white based on internal HP testing in January, 2018 compared to the HP Scitex FB750/FB550 Printer using UV-curable ink technology. White ink measured for the level of gloss at 60 degrees on a rigid material (acrylic). Tested using Glossmeter BYK micro-TRI-gloss (20°, 60°, 85°), compatible with ISO 2813 and ASTM D523 relative to glossiness measure. White ink capability may be optional, requiring purchase of the HP White Ink Option Kit.
- ² Most vibrant colors based on internal HP testing, January 2018 compared to leading competitive printers under \$350,000 USD. Tested in High Quality print mode on rigid (white acrylic 12-pass, 6-color, 120%). Internal HP testing with HP GamutViewer, Alpha Shapes=50.000

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