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Business // Finance // Market // Technology

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Yes, it's ITMA time!

The most important textile machinery exhibition opens its doors.

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Managing Director, Groz-Beckert KG
- ▶ **Interview with André Wissenberg,**
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Dear Reader,

after more than a four-year wait, the ITMA 2015 (the textile industry's most important trade fair) is finally about to open its doors. The fair is scheduled to take place in Milan from 12 to 19 November. Now staging its 17th event, the ITMA will no doubt more than live up to its special reputation for being a showcase of innovative machinery, as continuing this tradition is an unwritten rule of the industry.

There was no question in our minds that the ITMA and the exhibitors would feature prominently in this issue of the TexData magazine, since our sector (the textile industry) is dependent upon machinery, its productivity and quality. On behalf of our readers, we have attended the press conferences of the Italian association ACIMIT and the Swiss association SWISSMEM, where members gave us brief talks on what they will be presenting at the ITMA. In addition, we have spoken to numerous textile machinery manufacturers in Germany to find out more about what to expect and where their focuses lie. Our extensive ITMA preview is aimed at providing you with a comprehensive overview and helping you plan your visit to the fair.

In keeping with the ITMA theme, we are pleased to have had the opportunity of interviewing two companies which have a long-standing and dedicated commitment to enhancing sustainability and are continually developing new solutions and machines with this aim in mind. Eric Schöller, Managing Director of Groz-Beckert, has been replying to questions about innovation and sustainability, along with André Wissenberg, Vice President of Oerlikon ManMade Fibers.

Our review of the 55th Manmade Fibers Congress provides a compact summary of the innovations the industry can expect to see from Dornbirn. A further article looks into the opportunities and business growth in the field of textile coatings.



This time in our “Country Focus” series, we have chosen to feature Ethiopia, a country whose textile industry offers considerable potential and where much can be done in a sustainable and proper manner right from the start.

Allow me to end on a personal note: Four years ago, in the run-up to the ITMA in Barcelona, I took over the position of editor-in-chief with TexData. The ITMA has now come around once again and I would like to take this opportunity of thanking you all for welcoming me into the industry with open arms. It is incredibly rewarding to work in such an open, productive and dedicated international industry. And I also get a lot of enjoyment out of meeting textile experts and textile machinery manufacturers at the numerous events taking place throughout the world, where I have a chance to learn about new technologies and ideas and engage in some interesting conversations. In this vein, I am not only looking forward to the ITMA, but also to the coming years with all of you.

As always, we look forward to receiving your comments and suggestions. Please write to us at redaktion@texdata.com.

We wish you a very successful ITMA and an enjoyable time!

Best regards,
Oliver Schmidt

Welcome to Milano



Welcome to ITMA

Welcome to Monforts

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Hall 10 | Booth E 101



www.monforts.com



ITMA 2015

www.itma.com

**12 - 19 NOVEMBER
FIERA MILANO RHO
MILAN, ITALY**

Yes, it's ITMA time!

***The most important textile machinery
exhibition opens its doors.***

ITMA. This is an event with a very distinct feel, like the Olympic Games or the Football World Cup. The mother of all textile machinery trade fairs only comes around in Europe every four years, and the fact that the innovation cycle of the textile machinery industry ties in with this schedule is what makes the fair so special, indeed unique. Founded in 1951 by CEMATEX, with its first-ever event taking place in Lille, the ITMA will be entering its 17th round from 12 to 19 November. It is due to take place in the Italian city of Milan, at the new exhibition centre Fiera Milano Rho, which is perfectly equipped for staging all manner of technical and mechanical engineering fairs. Fiera Milano is one of the largest, most modern, efficient exhibition districts in existence. The complex is linked to the city by underground and rail services and offers 345,000 gross square metres under cover (plus a further 60,000 square metres outdoors), twenty pavilions, 74 meeting rooms, 10 of which in the Stella Polare Convention Centre, 84 eating places, 10,000 parking spaces for visitors and 5,000 for exhibitors.

Four years ago in Barcelona, the announcement that the Italian fashion city had been awarded the contract was met with jubilation by the Italian textile machinery manufacturers, spearheaded by their association ACIMIT, and there was a sense that the ITMA was “coming home”, although strictly speaking this is not historically accurate. It now remains to be seen whether the event itself will spark similar or even greater enthusiasm. There are some very mixed omens on that score. Nobody is very happy about the late timing, and the global economy isn’t running at full steam either. China’s economy is losing momentum. The new, much-coveted driving forces, such as India, Brazil, Russia, Indonesia, Mexico, Turkey and Nigeria, still need to ramp up the pace. Added to that, currency fluctuations, political crises, wars, refugees and turbulence on the financial markets hardly give cause for optimism about the ITMA.

On the positive side, however, the surge in the world population and notably the significant growth of an affluent middle class in many emerging countries is leading to an increasing demand for textiles.

Moreover, isn’t it fair to question whether the “major economic indicators” really do have a decisive impact on the success of a trade fair like the ITMA? Shouldn’t greater significance be attached to the more minor industry-specific indicators, which paint a far rosier picture? There are in fact a lot of positive signs. Let’s take the example of technical textiles. They represent a huge growth market, and it is still too early to estimate just how many potential applications they may have. Nonwovens are on the increase; digital printing is on the increase; coated textiles are on the increase - and the same applies to countless other segments.

Master the art of sustainable innovation

But it isn't just the growth of many textile segments that bodes well for the success of the ITMA. A far more convincing argument is the theme: "Master the art of sustainable innovation". Although the subject of sustainability has been on the agenda in the world of textiles for a long time, it has taken off dramatically in recent years, not just in the textile sector. Having progressed from a trend to a mega-trend, sustainability is now driving the global economy and its industries in a new direction at an unprecedented rate. This phenomenon could even be termed a paradigm shift.

If we accept the premise that sustainability of production is also destined to become the decisive purchasing criterion for consumers over the next twenty years, it is not hard to predict the significance of this topic for businesses and the extent of the changes that may be involved. Neologisms such as "price-sustainability-ratio" could become everyday usage. There is both a willingness and a necessity on the part of corporations, retailers and brands to address this topic while striving to achieve market leadership in their respective segments. This is having a significant impact on the supply chain. Organisations such as the Sustainable Apparel Coalition have even set themselves the goal of making textile manufacturing sustainability measurable for each individual textile, and they envisage displaying water, chemical and energy consumption figures on washing labels for consumers.

In the past, the low vertical integration within the textile industry's supply chain, characterised by a multi-tiered system of subcontractor service providers, had made the price of merchandise the sole deciding factor irrespective of production methods. However, a new way of thinking is now gaining ground. Commercial chains such as H&M have recently announced their intention to step up their auditing of suppliers, both in terms of numbers and stringency. It is therefore likely to become the rule rather than the exception for companies to carry out a precise analysis of their own supply chain and subsequently optimise their suppliers. In a survey conducted by McKinsey in 2014, as many as 43% of businesses cited the improvement of sustainability as being one of their strategic goals. Based on the evaluation of the survey, McKinsey's recommendation reads as follows: „Look to technology. Similarly, technological advances are creating opportunities to drive sustainability solutions. Yet only 36 percent of respondents say their companies are mostly or fully integrating sustainability into their data and analytics work. Companies that want to capture increasing value in a resource-constrained world should spend more time thinking about how to integrate their technological capabilities into their overall sustainability agenda.”

These are just a few points of view on sustainability intended to demonstrate that this issue is a contentious one which presents both risks and opportunities. The ITMA in Milan is the best place to find out about these opportunities from a manufacturing perspective and thus take a decisive step towards shaping your own future.

Textile Machinery



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www.machines-for-textiles.com



It will be interesting to see what solutions the textile machinery manufacturers come up with to make an impression on both you and us. The aim is to use less energy, water and chemicals and hence reduce CO₂ emissions. These are the most important parameters for improving industrial sustainability and serving the global goals of climate, environment and social policy.

Another interesting perspective is one formulated by Peter D. Dornier, Managing Director of the German manufacturer Lindauer Dornier. He rightly points out that this issue is not just about sustainability within the textile industry itself, but about sustainability that would not be possible but for the efforts of the textile industry. By way of example, he cites textile filters for clean air and pure water along with lightweight construction technologies which lower CO₂ emissions by reducing weight.

The notion that new technologies can be used not only for transforming existing in-house production but also for addressing new markets makes the ITMA all the more interesting and diverse for management and sales experts.

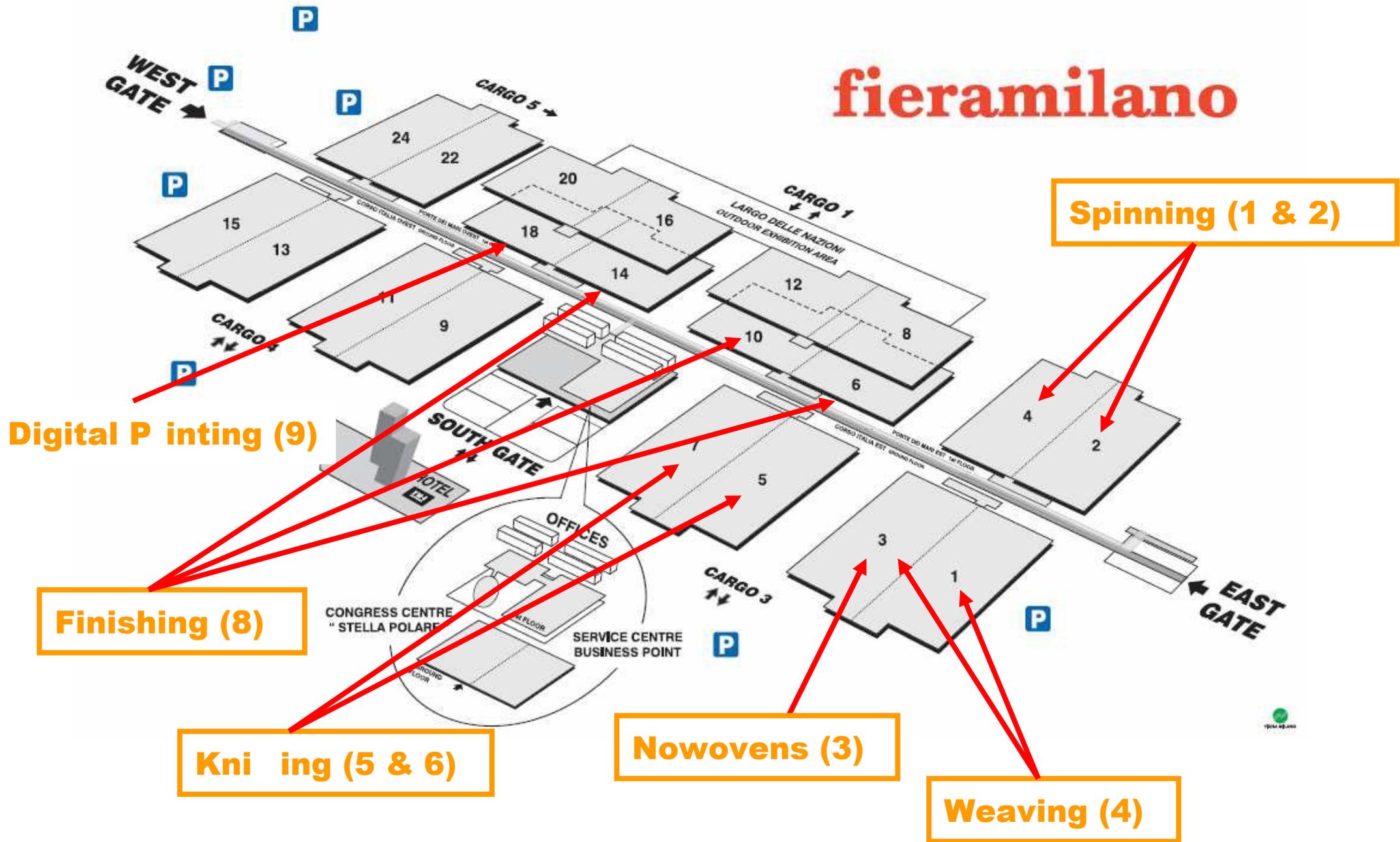
ITMA in facts

Now let's take a look at a few facts about the ITMA. 1663 exhibitors (+21%) from 45 countries (+-0%) will be presenting their machines and services over an exhibition area of 200,000 square metres.

As in the case of the last ITMA held in 2011 in Barcelona, more than 100,000 visitors are expected to attend. The ITMA is backed by over a hundred organisations, including the International Textile Manufacturers Federation (IMTF), the International Association for the Nonwovens and Related Industries (EDANA), the Industrial Fabrics Association International (IFAI), the European Specialist Printing Manufacturers Association (ESMA), and Textile Exchange, along with numerous textile associations, textile machinery associations and chambers of commerce from the individual textile-manufacturing countries. Not surprisingly, the host country, Italy, accounts for the largest number of exhibitors - an impressive 444 - followed by Germany with 234 and China with 182. As usual, Cematex has divided the individual machinery segments into chapters, which have then been assigned to specific halls. The most well-represented segment, with 301 exhibitors, is textile finishing machines (chapter 8, hall 3, 6, 10 & 14), followed by spinning machines with 282 exhibitors (chapter 1, hall 2, 4 & 6), weaving machines with 180 exhibitors (chapter 4, hall 1), warp knitting and knitting machines with 127 exhibitors (chapter 5, hall 5, 7), and nonwovens machines with 72 exhibitors (chapter 3, hall 3, 4). It is also worth noting that the new chapter, printing including digital printing, has attracted as many as 110 exhibitors (chapter 9, hall 3, 14 & 18).

Once again, the trade fair is being organised by MP International, and it looks as if everything will go to plan. MP has already demonstrated its capabilities in Barcelona and, with the benefit of its experience from that event, will no doubt be ensuring that the ITMA runs like clockwork.

fieramilano



Judging from the excellent work that has gone into preparing the fair, there is every reason to assume that this is the case.

Four amazing conferences

The trade fair will be rounded off with a suitably impressive supporting programme of high-profile conferences; the fascinating array of topics will make the alternative option of visiting the exhibition halls seem a little less appealing on conference days.

The programme is due to commence on 13 November with the second World Textile Summit which, as was the case four years ago, has been able to enlist the services of some well-known faces from the industry to talk about their insights, views and experiences to what promises to be a large audience; the aim is to help listeners identify the key factors influencing the future of their own companies and set about making necessary adjustments. Speakers such as Mary Porter-Peschka (Director, International Finance Corporation - World Bank), Frank Henke (VP for Social & Environmental Affairs, Adidas) and Helga Vanthournout (Engagement Manager, McKinsey & Co) will be explaining how they envisage the future of textiles. In the words of the organiser: „The World Textile Summit 2015 will explore business responses to the international drive for sustainable manufacturing. Going beyond the agendas of other textile sustainability conventions, it will seek to answer the questions that really matter to strategic decision makers.”

The Nonwovens Forum scheduled for 16 November and backed by the International Association for the Nonwovens and Related Industries (EDANA) is destined to have similar significance for the international nonwovens industry as WTS. Sustainability is of vital interest for the nonwovens sector, and EDANA has already undertaken substantial efforts in this direction. The list of speakers who will be lecturing on numerous specialist subjects includes: Johann Philipp Dilo (General Manager of the Dilo Group - Germany), as well as Martin Rademacher (Sales Manager) & Ingo Mählmann (Senior Manager Business Development Nonwoven of Oerlikon Manmade Fibers - Germany), who will be presenting the latest manufacturing technology, and Pierre Wiertz (General Manager, EDANA - Belgium), who will be providing an overview of the nonwovens industry along with market figures at the end of the conference.

The Textile Colourant and Chemical Leaders Forum will take place on 14th November and will inform about a wide range of topics in three sessions: session 1 called “the issue” contains topics related to chemical pollution and the environmental issues and how this impacts the market place, session 2, “the solution“ will find answers on how does the supply chain respond and session 3 keeps an eye on “the future” and follows the question, what are the trends and/or game changers moving forward? Leading experts from the chemical, dyeing and finishing industry will give lectures about some of the most important topics for the textile industry like Detox, Reach, ZDHC and much more. For example Lutz Walter, Secretary General, The European Technology Platform for the Future of Textiles and Clothing (ETP) will give a speech with the topic:

“Materials, resource-efficiency and new business models – the drivers for sustainability in the European textile and clothing industry”. The fourth major conference is expected to attract large numbers of visitors, as its theme - digital printing - is seen as a steeply growing market with rates in excess of 15%. With its numerous new machines of industrial standard, digital printing will be making its definitive breakthrough at the ITMA 2015. The WTiN Digital Textile Conference @ ITMA, will offer detailed insights into these innovations across applications that include fashion, home and technical textiles. At 15th November experts like Jos Notermans, Commercial Manager Digital Textiles SPGPrints and Michele Riva, Sales and Marketing Director EFI REGGIANI, will introduce latest technology to the audience. Other topics are single pass machines, fast fashion, innovations in ink and market perspectives of different countries. James Rankin, Analyst at WtiN will speak about global market developments of digital textile printing.

Exhibitors and their innovations

This brings us to the most important aspect of the fair: the exhibitors and their machines. Nowadays, unlike in the past, many exhibitors provide a preview of what innovations visitors can expect to see at their stands prior to the opening of the fair. This represents a break with tradition, but one which we consider to be in tune with the times, as it is important in the run-up to the fair for companies to stake out their positions and provide visitors with clear incentives to visit their stands.

As a result, we are now able to provide you with some up-front information about many of the exhibitors in our ITMA preview, including the exhibits to be displayed or at least the machines or subclusters featuring innovations. As usual, we have structured our preview in accordance with the textile value chain, stating the ITMA chapter and the halls for the respective sector as well as the booth numbers of the individual exhibitors.

Spinning preparation, spinning, winding and twisting machines (Chapter 1 & 2)

In the spinning machine segment, many manufacturers will be focusing on the improvement of energy efficiency. Owing to the high energy consumption and resulting high energy costs for manufacturers, this topic is nothing new, but it is likely to gain further impetus from the focus on sustainability. It will no doubt be important to take a closer look at the innovations in the individual spinning processes and possibly to diversify. In particular, we can expect to see innovations in rotor and airjet spinning, as these processes are generally less well established than ring and compact spinning

In addition, waste avoidance solutions of all kinds are likely to be of special interest to cotton spinning mills. Innovations can also be expected in the field of disruption factors, such as the removal of foreign bodies. The same applies to the fields of yarn and fibre cleaning and testing.

Another topic which continues to attract high interest is automisation and the optimal interplay between individual machines in the production line. From a geopolitical perspective, it will be interesting to see whether countries with very low energy costs, such as the USA, will view the rebuilding of a large-scale spinning industry as a business model in which they are prepared to invest.

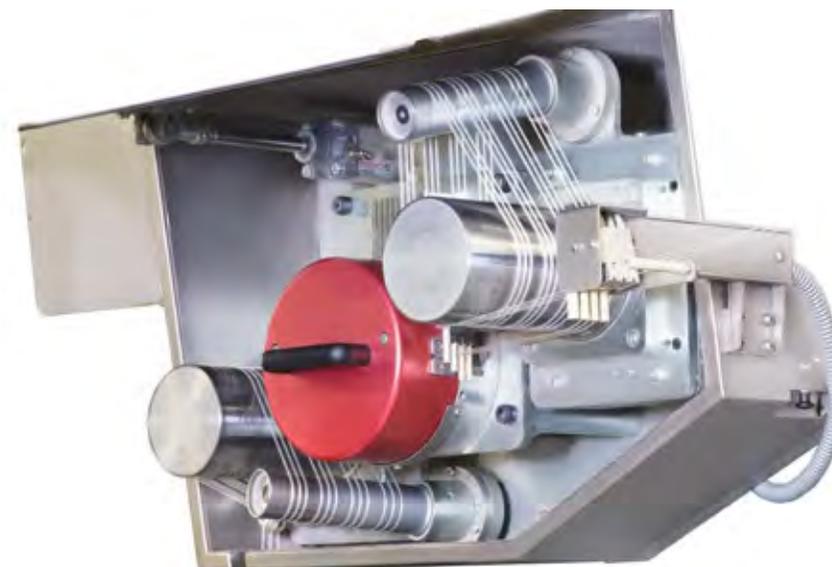
In the field of man-made fibres, major investments have been made over the past few years, particularly in China, and recently there have been numerous reports of over-capacity. However, the fibre market is expected to experience strong growth up until 2020, and this growth will have to take place primarily in man-made fibres, as cotton and other natural fibres will not be able to increase their capacity on the scale envisaged. In the cotton segment, therefore, the main concern will be optimisation, while in the man-made fibre segment it will be a case of creating new capacity. Machines for the production of recycled yarns are also likely to be in demand, as R polyester is required to qualify for GOTS certification, for instance.

The field in which we expect to see the most innovations are spinning preparation, twisting and winding, simply because these are where several market-leading enterprises have huge innovative strength.

Lets have a closer look at some important exhibitors in the chapters 1 & 2.

Oerlikon (Hall 4 / Booth A 105) with its two **Oerlikon Barmag** and **Oerlikon Neumag** competence brands is latching onto the successful product developments of the past few years. In addition to unveiling the strategic expansion within the polycondensation business by means of the joint venture with Chinese partner Huitong, the segment is above all focusing on offering its customers total manmade fiber spinning systems solutions.

Oerlikon is the world's only manufacturer that has the know-how and the capacities to offer complex manmade fiber spinning systems for polyester, nylon and polypropylene from a single source. Something that all visitors to the 650-m² trade fair stand will be able to convince themselves of.



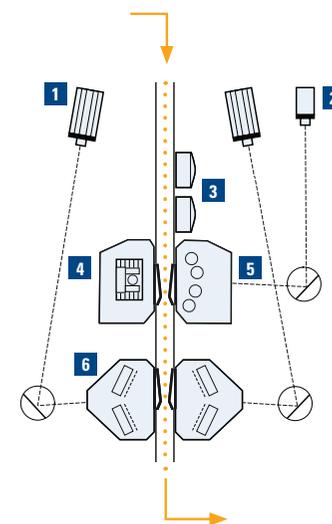
Oerlikon's new RoTac3 for the 3-end BCF plant S+ reduces the compressed air consumption by up to 50%

T-SCAN

How can the benchmark for foreign part separation be improved even more?

With our new T-SCAN TS-T5. While our Foreign Part Separator SP-FPU works already with three modules - for coloured/dark, transparent and fluorescent foreign parts - the T-SCAN uses an additional module for shiny foreign parts.

Innovation number two is the unique T-SCAN camera and lighting technology with 1072 LEDs. The new lightsystem is significantly brighter, more energy saving and durable, while the cameras feature a higher resolution and scanning frequency.



- 1 Cameras with very high resolution and scanning frequency
- 2 Camera with polarisation filter
- 3 Speed sensors
- 4 Lighting unit with polarisation filter
- 5 UV lighting unit
- 6 LED lighting module with 536 LEDs and special lenses

Getting fibers into shape – since 1888.



We look forward to seeing you
ITMA 2015 Milan
Hall 2, Stand C113

TRÜTZSCHLER SPINNING

Furthermore, Oerlikon Barmag will be showcasing ground-breaking innovations in the areas of **POY/DTY, FDY and IDY filament spinning and texturing** as well as the manufacture of **monofilaments**. Here, the focus is on further new product developments and optimizations in line with the Oerlikon **e-save** philosophy, which promotes the manufacture of products oriented on sustainability. Oerlikon Neumag will concentrate on its BCF, staple fiber and nonwovens core competencies and present all interested visitors with the latest product developments by means of its virtual reality technology in the 3D showrooms.

To the key issues for the competitiveness of spinning mills, **Rieter (Hall 2 / Booth A106)** is offering value-adding innovations at the ITMA 2015. All three business groups are showing their product and service innovations for complete systems, spinning preparation and end spinning process under their trademarks Rieter, Bräcker, Graf, Novibra and Suessen. Highlights are the extended SPIDERweb Mill Control System – an important step applying the „Internet of Things“ for optimising the spinning mill, the new E 36 / E 86 combing set, the new R 66 rotor spinning machine and the J 26 air-jet spinning machine with the Polyester option P 26. Two of the new machines are very interesting and for sure will be highlights at the booth.



The new Rieter air-jet spinning machine J 26

The fully-automated, double-sided **air-jet spinning machine J 26** with 200 spinning units, up to 6 robots and a delivery speed of 500 m/min ensures economical and flexible production. An attachment ensures 100 % polyester spinning with long running intervals without manual cleaning.

High performance is supported by the piecing preparation system with reduced piecing time. The winding unit ensures optimal package build-up and therefore higher package weight. Technological innovations and adapted settings enable to produce soft Com4®jet yarns.

Rieter says that the fully **automatic rotor spinning machine R 66** sets the standard for quality and productivity. The new spin box S 66 ensures high spinning stability and yarn strength. The R 66 has low energy consumption, solid construction and is easy of use. The modern spinning technology offers opportunities for optimisation for a wide range of applications. The R 66 offers a consistent yarn quality including yarn-like AEROpiecing.

The Business Group After Sales is presenting innovative spare parts and conversions packages as well as after sales service offerings which maintain the competitiveness of Rieter systems, reaching from technology support over maintenance audits and repair services to customer training. In addition Rieter After Sales offers end-to-end mill solutions leveraging on Rieter's system supplier expertise.

Saurer (Hall 2 / Booths 109 and 104) has the goal to set new standards at the ITMA 2015 with innovations, **E³** and **SUN**. And the Saurer Group will reveal all new E³ labeled machinery with the triple added value for the customers and wants to showcase new standards in energy savings, production flexibility, highest productivity and the most complete automation processes. **SUN** stands for **SERVICE UNLIMITED** and this means that Saurer wants to ensure maximum efficiency during the whole product life cycle.

Schlafhorst will be presenting the next generation of the revolutionary **Autocoro**. The innovative single spinning position technology proves its technological superiority once again. Compared to the previous model, the new Autocoro uses much less energy – the savings are in a two-digit percentage range.



Will be updated: Autocoro 8, which was introduced at ITMA 2011 Barcelona

Longer machines, higher rotor speeds, intelligent automated processes and minimized maintenance costs quickly increase efficiency, productivity and profitability.

And Schlafhorst will be presenting a new, even more productive, energy-efficient and user-friendly generation of the **BD 6**. Take-up speeds of up to 230 m/min, two-digit energy savings, an LED signal system for fast checking and an ergonomic machine operation are some of the pioneering improvements.

Furthermore Schlafhorst will be unveiling the new **Autoconer 6** to a large audience at ITMA 2015. The innovative winding machine has been available for delivery since the beginning of the year; the initial customers are positively impressed by its performance.

Schlafhorst will be presenting an updated generation of the new Autoconer 6, which is even more energy efficient, economical and user-friendly. Visitors to the exhibition will be able to experience virtually all of the conventional machine configurations and the entire textile technological application range of the Autoconer 6 in action.

Autoconer 6 comes with a fully automatic link to the latest Zinser ring spinning machines and the currently most advanced automation solution. The unlimited possibilities for process-oriented package optimisation, bobbin processing and rewinding will be demonstrated on a second machine.

Zinser will be presenting itself as a pioneer of new cost-effective automation solutions for ring spinning. With the **Zinser CoWeMat** and **CoWeFeed doffing automation systems**, the world's most economic self-cleaning compact spinning technology **Impact FX**, and the proven cutting-edge technology for reliable and precise processes, Zinser is setting new standards with every machine length for yarn quality and profitability in ring spinning.

Allma and **Volkman** will attract the attention of industry professionals with numerous technological innovations. With the **CompactTwister**, the companies are presenting their high performance twisting machine for staple fibre yarns. Energy savings of up to 40% can be achieved with the eco-drive concept and the eco-spindle technology with adapted spindle combinations. The productivity of the CompactTwisters is 30% higher, thanks to the high delivery speeds of up to 120 m/min. Operating costs drop due to the low energy, space and maintenance costs. The ergonomic benefits of the CompactTwister include greater ease of use due to the improved take-up geometry, central settings and handling aids, which result in an up to 10% reduction in operating times. The CompactTwister covers all yarn materials as well as count ranges.

Furthermore Volkman will present the new **CarpetTwister** and **CarpetCabler** product generation. The outstanding characteristics are the energy-saving spindle family and the maximum quality with optimum economic efficiency. Spindle and spindle pot versions as well as drive and storage technology enable very high energy savings of up to 40%. With delivery speeds of up to 120 m/min during uptwisting, reduced space requirements due to smaller spindle gauge and the adaptation of the spindle speed, productivity can be increased by up to 45%.

Operating times can be reduced by up to 8%, thanks to the pneumatic creel, threading aids, new pneumatic centrally adjustable creel yarn brakes and ball yarn brakes. A new feature is the computer controlled drive system, which enables a quick changeover to new yarn lots and the change of production parameters. This increases the machine availability and simplifies operation. After cabling, BCF carpet yarns are heat set in a second process step to stabilise the shape. Volkman integrates this process step in the cabling machine.

One more product to be presented is the TechnoCorder TC2 which comes with independent spindle technology and offers 400 m/min delivery speed and the 25% higher package density. And this pays off: productivity is up to 30% higher and energy costs drop by up to 10%. The TechnoCorder TC2 is distinguished by attractive developments, such as the new FlexiPly equipment for the production of hybrid yarns and the new larger 830 mm spindle spacing for the processing of coarse yarn counts.

Energy-optimised modern drives and a lean yarn balloon, thanks to the optimised balloon geometry and height-adjustable balloon yarn guide, lead to low energy costs.

The independently driven spindles enable limitless possibilities for the creation of new twist constructions. Two spindle gauges cover a large range of yarn counts, from 235dtex to 33,000dtex. PrimePac quality twist packages can be manufactured according to individual needs. Compact twist packages save up to 30% in transport costs and make further processing more efficient.

Furthermore the **Saurer Components** companies Texparts, Daytex, Heberlein, Fibrevison and Temco will show their latest developments. A few examples. **Temco®** will showcase the new Covering Spindle type USU for 5.5” and 6.5” bobbins with a package weight of up to 2.5 kg. **Fibrevison**'s latest Fraytec FV2 boasts increased trigger optics with software selection of fault size. The latest PolyJet by **Heberlein** has the full range of jet inserts for producing all yarns including finer denier (<50 den) with 0.9 mm air orifice. **Daytex®** will present their famous shrinkage belts which are engineered to produce the best quality for all different shrinkage applications. Daytex uses 100% premium pure natural rubber supplied by selected plantations to ensure constant quality. And compact systems of well-known suppliers found in the market can be retrofitted to the well established weighting arms PK 2630 SE and PK 2630 SEH by **Texparts**. The latter is a complete substitute of weighting arms for ring frames with hexagonal support rod.

Of course a visit of the Saurer booth will be a must for spinners.

Savio (Hall 4 / Booth B101) will highlight breakthrough innovations in the winding segment, which is today its core business. There are important novelties in the pipeline, all representing high-end and niche products with important technological content. A new pulsing star in the Savio winding family. In the center of the presentation stands the new **PulsarS**, representing the fifth generation of Savio winding machines after the iconic models Ras, Espero, Orion and Polar. This generation of winding machines is the new pulsing star in the Savio product range; it is a machine with a sustainable eco-green advantage, especially replying to market demands in terms of energy efficiency, productivity and air conditioning savings of winding room. Savio R&D department has been committed for over 30 years in sustainable development projects, such as energy saving and recovery, reductions of noise, pollution, water consumption and electro-magnetic emissions. Today the heritage continues: Savio R&D team has studied a revolutionary concept of the winding process to reply to the real needs of the market for new solutions and utmost flexibility, towards on-going demand of high quality yarn package and energy savings.

Multicone is a new technology in Savio product portfolio, recently presented at ShanghaiTex exhibition in China. This new digital yarn layering technology (drumless) is now available for Polar winding machines, and is especially addressed to customers producing packages for dyeing and very fine counts.

Savio can offer a very complete Polar family, in order to meet all customers' requests in terms of flexibility and productivity. The Multicone system allows the tailoring of package for different end use (dyeing, weaving, knitting, etc) with simple settings on PC.



PulsarS is the successor of the famous Savio winding machine Polar

Volufil Multicone combines thermic treatment and winding process on a single machine. The consolidated success of the “Volufil” and the new demand of different yarns for diversified fabric applications, have requested several new developments on the machine technology. The new Volufil Multicone represents the proper reply to the markets requirements.

Savio has extended the technological process on acrylic heat set yarns, on special yarns (chenille and polyester) and on traditional HB Acrylic fibers, also blended with wool and elastomeric filaments. The new winding system “Multicone” allows the best solution for any yarn type and package format with different traverse take-up.

SSM Schärer Schweiter Mettler (Hall 2 / Booth A101/102), the inventor of the electronic yarn traverse system, will continue their tradition of trend-setting with the presentation of breakthrough technologies. With the introduction of the new XENO-platform, SSM wants to demonstrate their lead in the market. Six new product launches in the Winding & Doubling segments and two in False-Twist & Air-Texturing will be shown for the first time. The new SSM modular winding machine platform **XENO** combines dye package winding, rewinding and doubling applications with three different winding technologies. The XENO is available with counter rotating blades (XENO-BW), with friction drive system (XENO-FW) and with high quality SSM yarn guide system (XENO-YW). With the new platform, SSM is able to offer the three winding technologies for assembly winding as well (XENO-BD, XENO-FD and XENO-YD). Complying to the growing automation demand (due to increasing labor costs) all the XENO machines could be equipped with an automatic doffer system. Another advantage and benefit of the XENO platforms is the enhanced DIGICONE® 2 winding algorithm, enabling a 10-20% increase on dye package density with same dyeing recipe. The SSM XENO platform will be manufactured 100% in Switzerland for highest demands and quality.

The SSM **DURO-TW** precision winder for all technical yarns up to 50'000 dtex offers a new level of flexibility and winding quality in one machine and the assembly winder **DURO-TD** allows the plying of multiple ends/yarns; independently of them being of the same type or completely different.

From SSM GIUDICI the brand new **TG2** machines will be shown. The TG2 platform is the next step of the well introduced TG1. It comes with an individual, frontal doffing system to allow double-sided concept of the machine (one full package and one empty tube in the cradle whilst a package is being processed). The **SSM GIUDICI TG2-FT** false-twist texturing machine combines a proven texturing path along with a spacing saving machine design.

The result is a machine for the cost efficient production of high quality Polyamide (down to 7 dtex), Polypropylene as well as fine count Polyester yarns. The **SSM GIUDICI TG2-AT** air texturing machine is designed for the cost efficient production of high quality air texturized yarns made of POY or FDY Polyester, Polyamide and Polypropylene and ranging from fine to medium final counts.



XENO – the new modular SSM winding machine platform

The **SSM TK2-20 CT/KTE** will be exhibited for Sewing Thread Finish Winding . It combines the established performance of the THREAD KING series with the functionality and operational comfort of modern control and drive technology. The TK2-20 stands for first-class unwinding properties and fulfils the highest yarn processing requirements. Besides of the cone winding (CT) the latest technology for Kingspools (KTE) will be shown. Furthermore SSM will present the TK2-20 KTE is a fully automatic Kingspool

winder and the SSM GIUDICI NOVA-CS, which is designed for the production of high quality elastic single- covered yarns ranging from fine to medium final counts. Besides of the presented application, SSM offers the new **X-Series** (PSX-W/D, PWX-W and TWX-W/D) for Dye Package Winding/Rewinding and Assembly Winding as well as the well-known machines for Air Covering, Draw Winding and Yarn Singeing.

Trützschler SPINNING (Hall 2 / Booth C113) announced that they will exhibit an advanced card with increased productivity and energy efficiency. We are very much looking forward to this innovation. The Trützschler TC 11 card, introduced at the ITMA 2011 in Barcelona, has been a milestone in terms of efficiency and productivity and also in terms of quality.

It offers approx. 40 % more production at same compact space, the highest quality due to longest carding section on the market, lowest operating costs and lowest waste quantities and last but not least the flexibility for quick lot changes. The question is whether we can expect a modified TC 11 or a new TC 15 card? Was it possible for the Trützschler engineers to make the phantastic TC 11 better in a way that it will get the honour of a new name? We really don't know and it will be the question until the first ITMA day.

Furthermore Trützschler said, that the draw frame product range has been further expanded. Here, the focus is on increased efficiency and reduced personnel requirements. Development in the field of combing has also not stood still. The Superlap requires less personnel and the Toyota-Trützschler Comber will show new application-oriented features. It is well known that today, quality yarns are only possible with efficient foreign part separation in the blow room. With three detection technologies in one machine, Trützschler has already set a high standard. The three modules of the existing SP-FPU system have the unique ability to reliably detect not only natural impurities, but also impurities caused by objects that are normally "invisible", such as PP, PE foil, PES, and bleached cotton threads.

The modules can be integrated into the various machines, either separately or combined; retrofitting is also no problem. Thus, the patented **SECUROPROP** process allows the implementation of an overall concept for foreign part separation. At the ITMA, further technologies will be added to the existing three. As a result, separation is even more effective.

This is the new **T-SCAN TS-T5**. The data acquisition system **T-Data** is increasingly becoming standard. Due to Trützschler-specific sensors on the machines, important quality data that cannot be acquired by any other system can be managed and evaluated here. This includes for instance neps in the card sliver or the energy consumption of the machines. T-Data is a web-based central data acquisition system for spinning preparation. All important quality data and error statistics of the machines connected are saved and can be viewed on your internet-capable notebook, Smartphone or tablet also while on the go.

Trützschler MAN-MADE FIBERS informs about new machines as well as new processes and end products. The company introduces a new generation of staple fibre machines to the market. The advancements stand under the heading of modularity - all components are designed as stand-alone units. The new modular components demonstrate their advantages not only in complete Trützschler installations; they are also ideal plug-and-play units when modernising existing installations. Ever since the product range of the Egelsbach equipment manufacturer includes staple fibre spinning, the focus - in addition to machine manufacturing - is increasingly also on product development. Trützschler Man-Made Fibers' „Hollow Conjugate Fibres“ are a new type of self-crimping fibres, distinguished by an extremely environmentally friendly spinning process. The filament sector highlights the diversity of its product range for the economic production of high-quality carpet yarns.

The focus is on the **new 3-end spinning system M30** with reliable components such as the polymer-independent spin beam and the HPTex texturing system. The portfolio thus covers 2-end, 3-end and 4-end concepts for various polymers, including recycled material. Now it is possible to respond to all process requirements as well as spatial or economic conditions even more effectively.

Trützschler CARD CLOTHING has expanded its flat tops selection by two new products which have been developed for special applications. The flat top **Novotop 58** is optimally suited for application in the area of fine combed yarns at high production speeds.



The nearly perfect TC 11 card will get a successor with increased productivity and energy efficiency

The flat top **Novotop 30** was developed for the processing of coarse and/or dyed fibres and regenerated fibres for rotor spinning. Both flat top types are available as MAGNOTOP and Classictop.

USTER Technologies (Hall 2 / Booth D104) celebrates its 50th anniversary this year. Reviewing 50 years of USTER's history of yarn clearing for automatic winders is a classic product success story. It demonstrates the continuing and sustainable development of a major product line, and reminds us that important previous stages of development still feature in the current generation of the USTER® QUANTUM 3.

In the past 50 years, a total of 15 yarn clearer models were introduced to the market. But it is not only about the innovative features invented over this period, but also the continuing trust shown by spinners, relying on these yarn clearers to safeguard the quality of their entire yarn production – essentially their reputation. USTER® QUANTUM 3, incorporates a revolutionary step forward, with the YARN BODY concept.

This is a new visual parameter – effectively presenting a 'picture' of the yarn and its quality characteristics. This feature works alongside USTER's SMART CLEARING TECHNOLOGY – a unique facility which allows users to determine all the required clearer settings at the push of a button. The integral Smart Limit system then suggests optimum clearing limits based on the YARN BODY. Since the acquisition of Jossi Systems AG Uster Technologies presented a wider range of products at mayor exhibitions under the motto "TOTAL CONTAMINATION CONTROL".

We expect that Uster again will demonstrate this unique concept and let visitors know the way USTER® JOSSI instruments complement existing USTER® systems to create a complete solution to the long-time challenge of contamination in cotton mills.



The current yarn clearer for automatic winders: USTER® QUANTUM 3

The key is interaction between the USTER® JOSSI VISION SHIELD and the world-leading USTER® QUANTUM 3 yarn clearer to enable spinners to specify and meet precise yarn quality standards consistently and reliably.

More very well known USTER products are the USTER® TESTER 5 offering extensive information on all the key yarn parameters for spun-staple or filament, and specialized laboratory instruments such as the USTER® TENSORAPID 4 and TENSOJET 4 strength testers and the USTER® ZWEIGLE HL400 yarn hairiness length measuring system.

Furthermore we can tell you that Uster will be presenting three brand-new products and more at ITMA. The undoubted highlight will be the launch of the new version of a star product, which will completely redefine global standards of yarn quality testing. We already know what it is but have to keep it as a secret. What we can say is that it is worth to watch it.

Weaving preparatory and weaving machinery (Chapter 4)

In the weaving machine segment, we expect to see a number of new developments and innovations, especially from the major manufacturers. No doubt the focus here will be on tweaking well-known machines in order to make the follow-on models even better in terms of productivity, performance, reliability and quality. Improving sustainability is not such a major issue in the weaving industry, as energy efficiency is already very good in many instances and energy savings lie in the region of 10%. Peter D. Dornier, on the other hand, has broadened the perspective on sustainability, pointing out that textiles are predestined to improve sustainability owing to their countless applications in environmental protection, sun protection, personal protection and weight reduction.

We can expect to see an increased number of weaving machines designed specifically for producing technical textiles. These applications generally place more complex and challenging demands on the weaving process. They require, for instance, greater accuracy, power, pressure, torque or rotational speed or better monitoring. As in the past, further innovations are likely with respect to machinery drive and control systems. It will no doubt also be interesting to see the new developments in the field of jacquard. This technology, which was developed by Joseph-Marie Jacquard back in 1805, still offers scope for further applications 200 years on. Let's have a look at a few leading exhibitors.

Lindauer DORNIER (Hall 1 / Booth H102) displays at the ITMA in Milan a multitude of innovations and new machine concepts for particularly sophisticated fabrics. Under the motto "The Green Machine" this family enterprise from Lake Constance, which manufactures all its machines exclusively in Germany, presents comprehensive solutions for sustainable technologies. DORNIER wants to unlock this potential of weaving solutions for a more sustainable world together with its customers. Furthermore they will offer numerous innovations for even more quality in conventional areas such as home textiles and clothing.

The highlight of the 400 m² DORNIER exhibition stand is a new generation of **rapier weaving machines** - the **P2** - that will be revealed to the public for the first time. The P2 is a further development of the DORNIER rapier weaving P1 machine with positive controlled center transfer. At the ITMA stand this machine will produce a high density filter fabric in super heavy design with a nominal width of 320 cm and two warp beams. For this width, this kind of fabric could, up to now, only be produced by means of special machines.

The extremely high density is achieved by a specially developed cloth take-up, an absolute uniformity of the filling density and a reed impact force of 5 tons. Such a high reed impact force requires to regulate the warp tensions with the warp let-off and cloth take-up at a constant value.

In order to master this warp tension, the **DORNIER SyncroDrive®** with its stable speed is crucial for the shedding. The load peaks in the whole shedding motion are minimized. And the produced uniform fabric has always the same mesh number per cm².

In addition to density this is another requirement for a high quality filter fabric. This new rapier weaving machine P2 provides for weavers a multitude of new fields of application as well as the chance to open up new markets. As real “Green Machine” it will prove its special strength and sturdiness above all in fields that require more efficient, heavier and denser fabrics with highest regularity. This applies, e.g. for filter fabrics for wet, fluid and solid matter filtration or for soot particle separation etc.

Further DORNIER exhibits are an air-jet weaving machine A1 and two rapier weaving machines P1 in their respectively latest version.

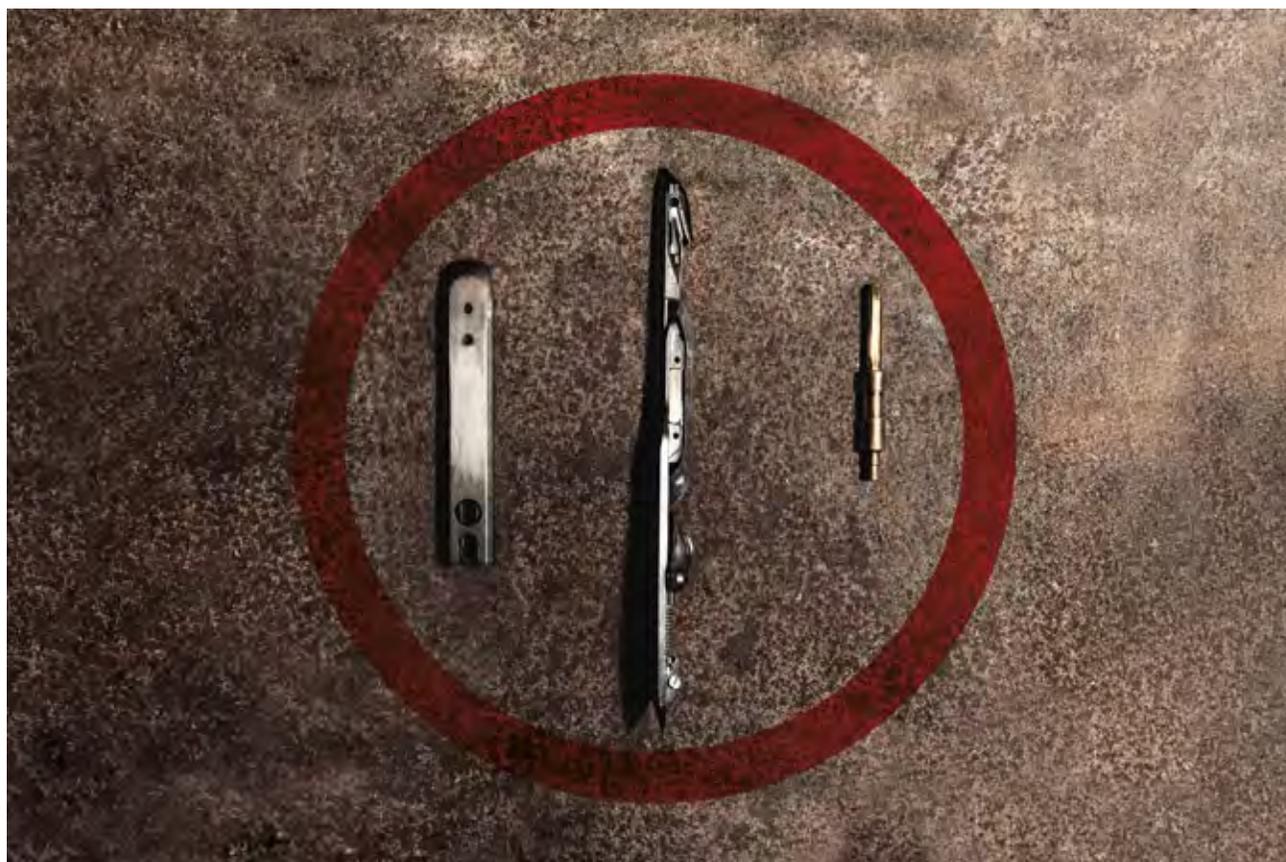
The A1 produces a suit fabric out of worsted yarn as fabricated by the leading textile factories worldwide. Weaving a high-quality fabric out of finest wool yarns with high productivity poses a major challenge. The DORNIER air-jet weaving machine succeeds in this challenge with its gentle filling insertion (“senza pelosità”, which means no hairiness of the fabrics) in combination with the automatic filling break repair. Nowadays, the air-jet weaving machine A1 is used at more than 1,000 picks/minute in industrial applications. The newly developed nozzle concept accelerates the filling thread gently and inserts therefore sensitive yarns even more smoothly.

The first P1 produces a sophisticated functional fabric out of different materials, e.g. upholstery fabrics for office chairs. Monofilaments and different flock yarns are used in the filling. The colour of the fabric can be chosen individually according to customer wishes. This challenging elastic material of high quality can only be woven using a very precise warp regulation.

For sophisticated ladies outerwear the second P1 produces a very exceptional fabric that was recently presented at the Première Vision in Paris. The special feature of this fabric is that it is woven with 16 filling colours and different materials at up to 600 fillings/minute. The basis for weaving such a multifaceted blended fabric is the well-tried DORNIER filling insertion with positive controlled center transfer ensuring a precise and reliable insertion of different filling yarns. A multitude of in part patented machine functions and components such as, e.g. DORNIER MotoLeno® for the selvedge creation or DORNIER AirGuide® for a precise rapier guidance in the shed, guarantee furthermore topmost process reliability.

At the Bonas stand a DORNIER rapier weaving machine P1 in Jacquard version produces alternately a medium weight carpet fabric and a gobelin. The machine captivates by its very compact design because the Jacquard machine is directly mounted and screw connected to the weaving machine. 18,432 hooks are used. A standard feature of this machine is the DORNIER SyncroDrive®. By eliminating the cardan shaft, the weaving machine runs significantly more smoothly due to markedly reduced vibrations.

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At the Stäubli stand a DORNIER air-jet weaving machine A1 produces airbag fabrics that is “one piece woven” (OPW). The combination of Jacquard weaving machine and A1 is the optimum solution for this special production technique. 12,228 hooks are used. We think that no weaver will miss the presentation of the new rapier weaving machines P2.



The new DORNIER rapier weaving machine P2, TGP 6/S G type, with a nominal width of 320 cm, Article: High density filter fabric

Groz-Beckert (Hall H7 / Booth D124) offers a comprehensive system for the weaving sector: cleaning, drawing-in, knotting, weaving. The product sector Weaving will exhibit a wide range of machines for weaving preparation, among others the fully automatic drawing-in

concept “WarpMaster” as well as different knotting machines from the KnotMaster series for the most different application areas. The machines will be demonstrated on common tying frames with clamping rod or clamping rail tension system.

Weaving accessories will be presented on a transparent model of a weaving machine: Depending on the application, the displayed fabrics vary from tire cord to jacquard fabric, each shown along with the corresponding Groz-Beckert products. The TWINtec weaving heald is available in different ceramic and steel executions, depending on the tape width and application. Moreover, high-performance heald frames, characterized by their high bending strength, will be exhibited.



“Warp Master” on weaving tying frame by Groz-Beckert

Stäubli (Hall 1 / Booth B111) will be showing a selection of its most modern products including cam motions, electronic dobbies and Jacquard machines with harnesses as well as weaving preparation systems with automatic warp drawing-in and warp-tying machines. Stäubli will demonstrate three complete Jacquard installations on weaving machines.

As an impressive premier, visitors can see the production of African damask at high speed on a type **SX Jacquard** machine equipped with a specific harness with 12,696 cords in conjunction with an air-jet weaving machine operating at a rate of approximately 950 weft insertions per minute. The weaving machine and the Jacquard machine are both operated by individual electronically synchronized drives, which is a special feature of this set-up.

The second noteworthy installation features the new **LXL Jacquard** machine with 11,682 hooks and Stäubli harness. This machine is particularly suitable for large-format applications and will be weaving an OPW airbag (one piece woven airbag) on a 280cm wide reed. The third installation consists of a rapier weaving machine and a LX Jacquard machine with a Stäubli harness producing extraordinary fantasy ladywear with remarkable designs. At another demonstration stand the new **LX12 Jacquard** machine for weaving narrow fabrics such as ribbons and labels will be shown with 192 hooks and harness with 8 repeats. Visitors can also see the highly regarded **UNIVALETTE** Jacquard machine in operation, developed particularly for weaving name selvedge.

Furthermore the third generation of Stäubli's rotary dobbies, the **S3060/3260** series, can be seen with many application examples at the Stäubli stand and the booths of many other weaving machine manufacturers. This new generation of rotary dobbies reaches new heights of performance and reliability. To complete the presentation of Stäubli shedding systems, a cam motion of the refined positive type **1600 series** is also being demonstrated at the booth.

In the sector of weaving preparation systems Stäubli is launching two additional products. The **SAFIR S60** is being demonstrated drawing in a four-colour 175cm-wide warp with Nm 135/2 and Nm 170/2 cotton yarns without a lease. The mobile **SAFIR S40** drawing-in machine can be observed in a surprising display.

The warp-tying process will be demonstrated with two warp-tying machines: **MAGMA** for technical and coarser yarn counts and the proven **TOPMATIC** for standard applications, handling even the finest yarns.

The Stäubli business unit **Schönherr** carpet systems boasts another spectacular product launch: Visitors can discover the new **ALPHA 500** carpet-weaving machine in operation, weaving different types of carpets.

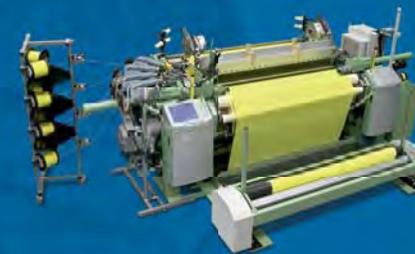
In addition Stäubli will introduce the **TF weaving system**, launched in spring 2015, to visitors interested in **technical textiles**. TF is a complete weaving system with a maximum of modularity, ideally allowing individual configuration.

The TF system, developed and produced by Stäubli, is designed to fulfil specific needs of future-oriented weavers of new fabric types such as heavy multilayers, multilayers with new types of structure and material mix, reinforcing fabrics for lightweight applications and spacer fabrics. Visitors will see astonishing fabric samples.



The new Stäubli SAFIR S40 drawing-in machine is an important step for automation in weaving preparation

A TOUCH OF DORNIER



"Quality creates value" – when it comes down to safety and comfort, technical textiles woven on DORNIER weaving machines are a class of its own. Whether bullet-proof aramide, glass or carbon, whether finest light-weight spinnaker cloth, air-bags or breathable high performance fibers: The DORNIER weaving machines produce the best possible cloth quality at the most reasonable cost in all these areas.

The DORNIER system family of air-jet and rapier weaving machines has served as a reliable tool for pioneers and market leaders for decades. Now the new generation of A1 and P1 weaving machines sets the top level of weaving another notch higher.

Quality creates value

DORNIER WEAVING

www.lindauerdornier.com

From **Itéma (Hall 1 / Booth A101)** we expect a lot of innovations because they have a strong focus on innovation and R&D. Another reason is that the company has been very successful in the last two years with a 60% growth in sales and a continuously grown up, more than doubling the volumes of textile machines sold worldwide since 2012. At the beginning of September Itéma has officially launched a brand-new terry weaving machine, the R9500terry, and opened the doors of the new training center, ItémaCampus. The new loom was presented in a series of events in July and September entitled “Weaving Terry Like Never Before” to a select panel of worldwide customers.

The only manufacturer in the world providing the top three shuttleless weft insertion technologies: rapier, airjet and projectile has announced some details about their ITMA participation in the last company report. They will present, along with the new R9500terry, 5 other looms on their booth and several more on the Partner booths, both rapier and airjets. All of them presenting new solutions, devices and applications for specific and increasingly demanding weavers’ expectations, including the new evolution of the rapier which will equip most of the R9500 looms.

Itéma says, that the new Itéma Rapier **R9500 2.0** (available both for guided and free-flight applications) represents the ultimate solution in terms of weaving flexibility and covers the full range of weft types. And furthermore, that it will dramatically reduce weft stops, increase efficiency and boost productivity.

Notwithstanding the fact that the Group (thanks to the legacy of Sulzer Textile and Vamatex, now both part of Itéma) invented many years ago the positive rapier solution, Itéma confirms its approach of a highly evolved “negative rapier”. Itéma sees it as the best choice for customers, due to less complexity, lower costs, higher durability and easier maintenance and, last but not least, much higher performances.

We have no information about the other five looms on the booth. However, we guess that at least one of it will be Itéma’s absolute best-seller, the R9500 weaving a technical fabric. At the Techtexil India in September Itéma two brand-new applications available on R9500: fiberglass and airbag OPW.

The R9500 comes equipped with high-tech rapiers which ensure its versatility. Flexibility and reliability are guaranteed by the FPA-Free Positive Approach – the weft transfer system developed by Itéma’s R&D specifically for tech applications, with no guiding elements in the shed. With the FPA rapiers there are no limits for the tech weaver, making it possible to weave even the finest or high tenacity yarn, multiple pick insertion system. This, coupled with the new motorized weft cutter, ensures that the widest range of fancy, multifilament and monofilament yarns is successfully woven on Itéma’s R9500. Moreover, the simplicity of the Itéma rapiers provide for easy setting and a superior machine performance in terms of speed and efficiency.



IteMa's best-seller, the rapier weaving machine R9500 comes in a new 2.0 version

Another machine we personally would like to see on the booth is the **P7300HP V8** which features a unique weft insertion system and the widest width in the market (up to 655cm). The projectile P7300HP V8 is ideal to weave a wide range of technical fabrics, especially the heaviest yarns. We will see what we get, but we will get innovation. That's clear.

KARL MAYER (Hall 5 / Booth C 101) has developed a new innovation in the field of weaving preparation. With the focus on flexibility for the warp preparation sector a sectional warping machine which can be extended from a standard equipment into a weaving preparation machine for special applications.

Van de Wiele & Bonas (Hall 1 / Booth C101) will show important breakthroughs: not only new woven and tufted carpet qualities for area rugs and wall-to-wall, but also new machine generations will be introduced. The constant drive for innovation in Van de Wiele, is leading to new machine developments with more electronic drives, more automation, more flexibility and more productivity.

Van de Wiele wants to surprise visitors by the innovation on the extrusion, the tufting and weaving machines, the management control systems and more. or the electronic jacquards of Bonas the focus is on flexibility and productivity.

Four jacquards will be on display ranging from 5000 hooks for terry over 16.128 hooks for high density and fashion articles until 18.500 hooks directly mounted on the loom weaving light carpets and gobelin. Two machines will be with "smart drive", without cardan shaft, and the terry loom will run at a speed of 900 rpm. Furthermore new developments on Bonas and JTS harnesses will be shown for various kinds of applications.

Technical textile applications woven on the Van de Wiele distance weave machines VSi42 and Bonas H3D will be on display, showing the numerous opportunities with the Van de Wiele/ Bonas machines in that ever growing field going from aerospace applications to safety textiles.



One of the latest developments of Bonas is the Si9 jacquard

Picanol (Hall 1 / Booth D 101) will be presenting a wide variety of new airjet and rapier weaving machines. The year 2015 sees Picanol celebrating 40 years of manufacturing rapier weaving machines with the global launch of its new OptiMax-i and TerryMax-i machines. Picanol's flagship, the OMNIplus Summum airjet weaving machine will have new features and will be presented in the center of the new designed booth. Another highlight will be the new TERRYplus Summum (airjet) weaving machines, developed for terry cloth. Features of the new rapier OptiMax-i include the very fast industrial speeds of up to 750 rpm, the increased performance, rigid construction, new applications, intelligent energy efficiency, improved ergonomics and user-friendliness. The OptiMax-i is available in reed widths ranging from 190 to 540 centimeters.

Thanks to its optimized rapier drives it remains the fastest rapier machine with the Guided Gripper system (GC) and the most versatile one with the Free Flight system (FF).” The Guided Positive Gripper (GPG) system has been developed for dedicated technical fabrics. Thanks to the revolutionary Free Flight Positive Gripper system (FFPG), weavers are now able to combine and freely mix the most challenging filling yarns.

Other features developed to respond to an ever increasing demand for versatility include, among other things, the Electronic Filling Tensioner (EFT), the SmartEye filling detector and the SmartCut filling cutter.

In total Picanol will have ten weaving machines on display at its booth (4 OptiMax-i, 4 OMNIplus Summum, 1 TerryMax-i and 1 TERRYplus Summum) and will be weaving a wide array of fabrics including shirting, denim, terry and automotive right through to technical fabrics. Furthermore a Picanol OptiMax-i with jacquard will be on display at the Bonas booth and an OMNIplus Summum will be demonstrated at the Stäubli booth.



Four new Picanol rapier weaving machines OptiMax-i will be on display

Knitting and hosiery machinery (Chapter 5)

In the knitting segment, we are expecting numerous innovations and improvements with respect to both flat and circular knitting machines. In addition to the focus on patterns, yarn counts and the number of yarns, key importance is likely to be attached to improving operation, control, automation, quality, productivity and energy efficiency. It will be interesting to see how much emphasis is placed on the knitting of technical textiles. The field of components and needles is also expected to feature a large number of ingenious new solutions.

Another exhibit promising to be of high interest is the combined spinning and knitting machine already announced; we had an opportunity to take a closer look at the prototype of this machine at the ITMA in Barcelona. When it comes to innovations in the field of warp knitting machines, the onus is on the market leader, Karl Mayer, who will no doubt fulfil expectations. Let's have a look what will be new.

Groz-Beckert (Hall H7 / Booth D124) will present innovative products and services as well as its new booth concept with machines made of acrylic glass, giving exceptional insights into the textile world. By means of transparent knitting and warp knitting machines, the product sector Knitting will visualize the precision of its products and their perfect interaction in the relevant processes.

The individual elements can be removed and eyed in detail. At the exhibition the visitors will experience how this interaction can contribute to an increase in productivity and profitability. In addition, Groz-Beckert will present its expanded warp knitting range. With the new warp knitting parts, also for the warp knitting process, ideally matching tools are offered for the production of flawless fabrics and for highest productivity. The special highlight will be an innovation in terms of knitting needles used in large diameter circular knitting machines.



Groz-Beckert will present acrylic glass machines to give exceptional insights

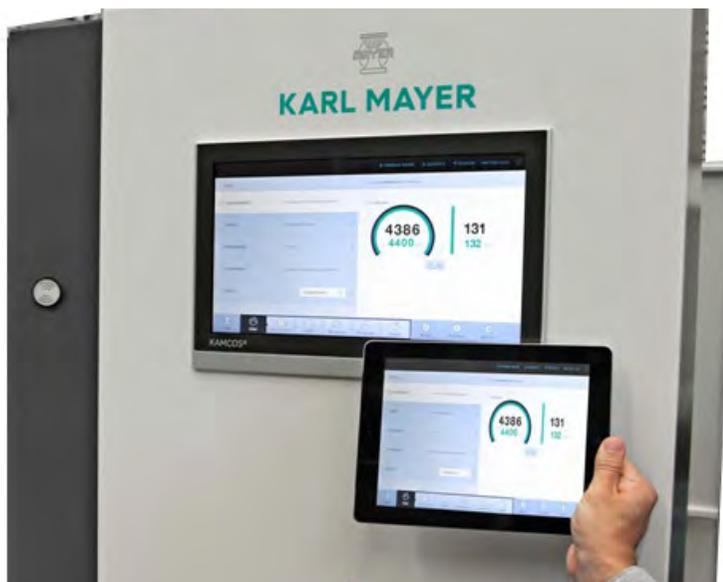
KARL MAYER (Hall 5 / C 101) will show seven new warp knitting machines in Milan, as well as new warp-knitted textiles, ideas for the after-sales sector and innovative warp preparation solutions. KARL MAYER announced that visitors can expect some technical systems that will definitely give them the edge in their business fields and that their exhibits will highlight the company as a supplier of solutions of maximum benefit to their customers and emphasise their position as a market and technology leader. That sounds ambitious but realistic.

More specifically in KARL MAYER will be showing a new **HKS 2-SE high-speed machine** with a unique performance profile. An important feature is the Low Energy Option (LEO) as a contribution to sustainability. Right from the very first glance, this new machine looks innovative, thanks to a completely revamped, modern machine design that focuses on ergonomics. This new corporate look will be standard on all future developments.

KARL MAYER will also be showing the **HKS 4-M-EL high-speed tricot machine**. Equipped with EL control, this new tricot machine is a flexible, highly efficient all-round machine. Lace manufacturers, in search of completely new looks, will definitely get their money's worth – thanks to a multibar raschel machine equipped with fall plate, in a working width of 242” and thanks to another lace machine for producing lace bands and outerwear. Innovative newcomer for manufacturing technical textiles is a new generation of the tried and tested HKS MSUS machine, based on the Wefttronic® concept.

Furthermore KARL MAYER has developed two new innovations with the focus on flexibility for the warp preparation sector: a **sectional warping machine** which can be extended from a standard equipment into a weaving preparation machine for special applications, and a **warp sampling machine** with a previously unreached working width, thus, opening up new applications.

Alongside all these new technical developments, KARL MAYER will be demonstrating that it has extended its all-round technical customer support services on a modular-based concept. The new features for more user benefit especially include offers for even more efficiency and performance of services and spare parts procurement.



Mobiles solutions will be a big topic at Karl Mayer

Besides, three innovative online shopping facilities for mobile phones – the apps **KARL MAYER CHECK PARTS** and **KARL MAYER CONNECT** as well as the **SPARE PARTS WEBSHOP** – ensure a short track to KARL MAYER.

Mayer & Cie. (Hall 5 / Booth H 111) will be showcasing its latest interlock, striper, single jersey and mattress material machines. In addition, the company will be presenting its spin-knit machine **spinitystems**, a machine that spins and knits at the same time and is to be launched at ITMA 2015. Single knitwear is manufactured not from yarn but from spinning mill roving. That makes the production process much shorter because ring spinning, cleaning and rewinding are no longer required. spinitystems is able to process a big variety of short-cut and staple fibres. Raw materials in their pure form can also be used, such as 100 percent combed cotton or other natural and synthetic fibres. Standard blends can also be used on the spinitystems.

Another exhibit on show will be a single jersey machine for elastomer plating that uses the tried and trusted relative technology developed by Mayer & Cie., which generally means a gentle stitch formation. This gentle needle and sinker guidance also reduces energy consumption. At the same time this single jersey machine delivers peak productivity along with a significant improvement in process reliability. A high performance interlock (HPI) machine will also be on show. The D4-2.2 II's forte is its peak productivity. With 4.4 systems per inch it produces up to 400 kg of fabric per day.



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At Home in the Textile World

Rooted in the region and at home worldwide – that's Groz-Beckert. As a leading international supplier of industrial machine needles, precision parts, precision tools and systems, we place the highest standards on quality and precision where our products and services are concerned. With around 7,700 employees and approximately 70,000 product types for the knitting, weaving, felting, tufting, carding and sewing sectors, we're the ideal partner in the textile industry. We help our customers achieve their goals – and have done so since 1852. www.groz-beckert.com



ITMA 2015
 Milan, Italy
 12–19 November 2015
 Hall H7, Booth D124

KNITTING , WEAVING , FELTING , TUFTING , CARDING , SEWING

GROZ-BECKERT®

And this machine is now also perfectly familiar with handling fibre yarns such as cotton. Mayer & Cie. has also continued to improve the D4-2.2 II in respect of both surface and distance. For manufacturing mattress covers, Mayer & Cie. will be featuring a further development in the double jersey double face department. The model on exhibit performs with maximum flexibility for all patterns and weights with 1.6 systems per inch. Thanks to a higher rotational speed, customers can expect higher productivity here too – along with best fabric quality and the lowest error rate.



Mayer&Cie´s spin-knit machine spinitsystems will be a highlight - not only for knitters

SHIMA SEIKI (Hall 5 / Booth A102) will propose several novel ways to produce WHOLEGARMENT® knitwear even more efficiently by exploiting 3D shaping and tubular knitting characteristics. Furthermore with Italy and the rest of Europe in its scopes, at ITMA SHIMA SEIKI will emphasize the economic and logistic advantages of WHOLEGARMENT® knitting for local production in domestic markets, which further increases the sustainability factor by eliminating time, cost and energy otherwise spent in shipping from off-shore locations.

In the center of the presentation will be MACH2XS, a new flagship machine featuring the company's original SlideNeedle™ on four needle beds, that earns its position at the pinnacle of modern knitting machine technology. Other flat knitting machine highlights include first-time exhibits of new technology for both WHOLEGARMENT® and conventional knitting machines, including new versions of the SRY-LP series with special loop presser beds that debuted at ITMA Barcelona 4 years ago and originated the recent popularity for hybrid knit-weave fabrics.

Demonstrations will also be held on an updated version of SHIMA SEIKI's SDS-ONE APEX3 3D design system that provides comprehensive support for the entire knit supply chain from planning and design to production and sales promotion.



KARL MAYER

WE CARE ABOUT YOUR FUTURE

COMPETENCE INNOVATION TECHNOLOGY SUSTAINABILITY

WELCOME TO ITMA 2015

MILANO, ITALY

NOVEMBER, 12 – 19

HALL 5, C 101





SHIMA SEIKI's new flagship MACH2XS

Stäubli, with its business unit **Deimo knitting solutions (Hall 7 / Booth B102)**, is showing its latest developments on two sock-knitting machines.

Stoll (Hall 5 / Booth A101) will show exciting developments and surprises. However, the central focus is on the cooperation and the best consulting possible for customers. Only with their customers Stoll wants to take the challenges and develop the best solutions for them.

With the newest technology and latest Capsule Collections Stoll presents the variable possibilities of the knitting technology. In addition to several exhibited machines of the current product range some totally new models are introduced including further models of the growing ultra flexible CMS ADF.

During live presentations of Stoll's Production and Planning System (PPS) visitors can see immediately how processes, production situations and capacity planning may happen in the real working life.

Stoll Fashion & Technology is famous for its innovative and creative pattern collections developing four Capsule Collections per year. At this years' ITMA the team is focused on presenting ultra coarse hand knit optics using the gauges E 1,5.2 and E 2.2 of the new CMS 520 C+ multi gauge.



Stoll's new CMS 520 C+ multi gauge

Dyeing, drying & finishing machinery (Chapter 8)

In textile finishing, the main focus will be on improving the energy efficiency of dryers, the special use of stenters in the production of technical fibres, and the increased standards demanded of the drying process. In addition to new installations, modifications are likely to acquire high significance, as they facilitate enhanced sustainability without the need for huge investments. Countless innovations are anticipated here in the field of control and automisation. We can also expect textile coating machines to attract high interest, as coatings are of vital importance for the growing technical textile market. In the field of dyeing, manufacturers of padders using small amounts of dye will be aiming to score in the sustainability stakes, and it will be interesting to see whether these long-established machines feature any significant innovations. Yarn dyeing and piece dyeing machines, on the other hand, are faced with an enormous challenge. It is here in particular that sustainability is set to become a key factor in retaining a competitive edge, as modern machines are expected, above all, to save water, energy, chemicals and dyes and to use eco-friendly chemicals, without diminishing the quality or productivity of the dyeing process. With this in mind, the textile chemical industry has developed a vast array of new dyes and chemicals in recent years and, in the light of increasing emphasis on environmental protection in China and the Chinese government's consequent focus on dye works, it will be interesting to see what innovation milestones await us here.

Quality makes the difference!

Visit us at the
ITMA Milano
hall 10, booth A101

FASCINATING TEXTILE MACHINERY
www.brueckner-textile.com

BRÜCKNER

Lets have a look at the exhibitors in this chapter.

A. Monforts Textilmaschinen (Hall 10 / Booth E101), dyeing-, finishing- and compressive shrinking machine manufacturer, in line with its continuing theme to providing solutions for both economy and ecology will be showing a wide range of advanced innovations and developments including exhaust air cleaning and heat recovery with automatic cleaning for its thermo treatment machines. Furthermore it continues to offer best technology in the marketplace including a new wide width, up to 7 m wide **Montex XXL stenter**: also suitable for non-woven applications.

The Monforts **Eco Booster HRC**, designed to minimise energy costs during drying and heat setting processes on stenters will be available, for the first time, for retrofitting to existing Montex installations. By contrast with purely static heat exchanger modules, the new heat exchanger module actually cleans itself during operation; eliminating standstill times for maintenance.

The Eco Booster permits a computer-controlled adaptation of the heat exchanger performance to the prevailing waste air stream. This optimised efficiency further reduces the process costs. Eco Booster runs fully automatically so that the operator has no additional duties to carry out. Its automatic cleaning feature means the machine doesn't have to be stopped during production runs.

Monforts with the **Eco-Applicator** is already nominated amongst the three finalists for ITMA Sustainable Innovation Award 2015 – Industry Excellence Award. The Eco-Applicator liquor application process offers significant energy savings with reduced drying capacity required for a wide range of applications such as felt finishes, coated materials and medical textiles including Nano coating, water repellancy, softeners, flame retardency and insect repellancy. A new version for knitted fabrics will be introduced at ITMA. It has been designed to apply a liquor to one side of the fabric; to apply a liquor to both sides of the fabric; to apply different liquors to either side of the fabric; or to apply two different liquors consecutively to a single side of the fabric.



Monfort's amazing Eco-Applicator comes in a new version for knitted fabrics

PULSAR by Loris Bellini

The new Era of yarn dyeing

revolutionary
[revolju:ʃənəri] adjective

- 1 Involving or causing a complete or dramatic change: "a revolutionary new machine"

An unprecedented machine

Revolutionary is the only possible term to describe this new machine. Appeared after three years of constant R&D by Loris Bellini's engineering team, Pulsar is the resulting effect of a brave intuition meant to introduce a new era in the yarn dyeing industry. What initially started as a new experimental phase intended to investigate for even better yarn dyeing quality, resulted into a fundamental step towards substantial and unprecedented cuts of running costs.

Surprise in numbers

What Pulsar can achieve is simply extraordinary and unexpected.

Electric load (installed power) of the main circulation pump is **70%** lower compared to what found on our ordinary machine, which is already much appreciated by the market for its lowest power consumption. Liquor ratio is **1:3,8**. Average consumption of chemicals, steam and compressed air is directly proportional with a reduction from **20 to 30%**.

Flexibility and astonishing quality

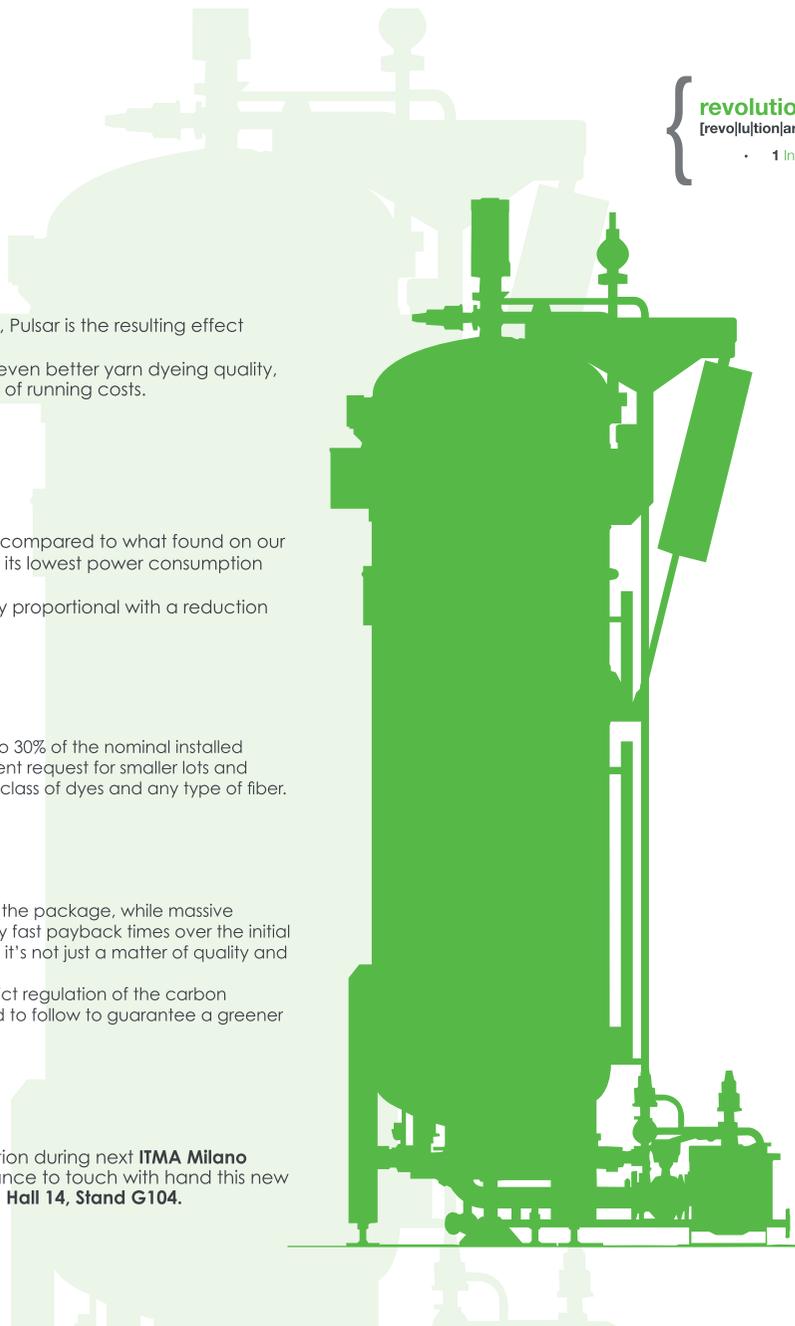
Our new Pulsar yarn dyeing system works in extreme flexible conditions from 100% to 30% of the nominal installed capacity (kg) with almost proportional consumptions. This will meet the most frequent request for smaller lots and higher flexibility outputs. Pulsar will also guarantee excellent quality results with any class of dyes and any type of fiber.

Eco

Right-first-time dyeing results are ensured by even lower dE readings inside-outside the package, while massive savings of electric energy, water, chemicals and compressed air will give extremely fast payback times over the initial investment and higher profits once that same initial investment is fully covered. But it's not just a matter of quality and savings. Pulsar is an important step forward for the environment as well. The drastic reduction of consumptions will make Pulsar fully compliant with the strict regulation of the carbon footprint and with the common sense of water saving that most Countries decided to follow to guarantee a greener tomorrow to the future generations.

ITMA Milano 2015

New Pulsar yarn dyeing machine will have an official European presentation during next **ITMA Milano 2015, Nov. 12-19, 2015** - Fiera Milano Rho, Italy. Please don't miss the chance to touch with hand this new revolutionary yarn dyeing technology! We will wait for you in our booth in **Hall 14, Stand G104**.



THINK **Eco work** Eco
technology for environment

| "TRADITIONAL" MACHINE BELLINI | | NEW MACHINE PULSAR | |
|-------------------------------|---|-------------------------|---|
| INSTALLED CAPACITY (Kg) | INSTALLED POWER ON MAIN CIRCULATION PUMP (kW) | INSTALLED CAPACITY (Kg) | INSTALLED POWER ON MAIN CIRCULATION PUMP (kW) |
| 100 | 18,5 | 100 | 3 |
| 150 | 22 | 150 | 4 |
| 250 | 30 | 250 | 7,5 |
| 400 | 45 | 400 | 11 |
| 500 | 55 | 500 | 11 |
| 700 | 55 | 700 | 15 |
| 1000 | 110 | 1000 | 30 |

In addition:

- over **30%** water saving
- **20 to 30%** savings of chemicals, steam and compressed air



A new **Montex horizontal stentering chain** will be introduced being completely maintenance free. This new chain type will complement the well proven Montex chain systems for horizontal and vertical chain return. The new Montex Hybrid Chain will be also available for retrofit to existing Montex stenters. Furthermore a complete new and further enhanced **visualisation software with 'finger tip'** control features offering smart phone-type techniques for Monforts machine operators and ensuring smarter operating procedures. Available for Montex new 8500 stenters, the new model also features a redesigned operator's platform with ergonomic advantages during finishing and coating processes. And last but not least a new **Denim stretching unit** will also be presented for achieving smooth stretching under the highest processing speeds during denim shrinking and finishing being incorporated into well proven twin shrinking units with twin felt calender. These are a lot of amazing innovations and we are looking for visiting them all.

Benninger (Hall 6 / Booth A106) will be highlighting the topics of open width dyeing of knitwear on the original Küsters DyePad, the newly developed Technical Textiles Division as well as the topic of Resource Management, an area that becoming increasingly important.

The **TEMPACTA** washing steamer was especially developed for all low tension washing processes and is mainly used for diffusion washing (fastness washing) and for the relaxation of knitwear. As a washing drum can be integrated, an intermediate rinsing process or additional intensification of washing is possible.

With the newly-developed original **Benninger-Küsters DyePad dyeing paddler**, great emphasis was placed on optimum accessibility and short, guided fabric runs. The nip dyeing option helps minimise dye liquor consumption and enables economical dyeing of extremely short batches. Perfect, absolutely reproducible dyeing results are guaranteed by the use of the original Küsters S-roller technology.

With the front and back washing effect, based on the patented double drum technology, the newly redesigned **TRIKOFLEX drum washing compartment** guarantees a high mechanical washing efficiency. It not only enables low, controlled fabric tension, but also crease-free fabric transport, even with sensitive fabrics. The TRIKOFLEX drum washing compartment also offers another advantage by controlled relaxation of synthetic and elastane fibres.

All these advantages also predestine the TRIKOFLEX drum washing compartment for use with technical textiles. To meet all requirements in this field, the compartment is available with a working width of 5,400 mm. The range for technical textiles is supplemented by the HYDROVAC water removal system and the original Küsters finishing paddler.

This offers the customers new options in the technical textile field – not only with regard to the technological processes, but also with minimum use of resources.



Benninger's newly-developed original Benninger-Küster DyePad dyeing padder

BRÜCKNER (Hall 10 / Booth A-101) presents themselves as sustainable, effective and with competent advisory service. The company will show for the first time the new ECOLINE machine concept combining in a unique way features which had been separate up to now. The outstanding attributes of the new **ECOLINE** concept are the air-through zone in the first half-zone and an integrated heat-recovery unit. This allows the saving of thermal energy and production increases. The dryer is provided with the proven alternating and split-flow air circulating system ensuring an optimum temperature distribution. All established heating systems are available (gas direct, gas indirect, thermal oil, steam). Almost any kind of woven and knitted fabric can be treated.

In the field of application technology BRÜCKNER presents a new development for minimum **impregnation applications**. Functionalization chemicals are applied with a liquor reservoir of only approx. 2.5 l for each m of working width. The reservoir can be used almost completely and no chemicals are wasted or disposed of. Impregnation as well as applications on one or on both sides are possible. Due to the little application quantity the following processes such as drying or curing have to evaporate only a low quantity of water which has clearly positive effects on the energy consumption of the respective dryer.



Brückner's new double sanfor line developed by BRÜCKNER and KLOPMAN INTERNATIONAL

Furthermore Brückner introduces a new machine concept for a double sanfor line developed by BRÜCKNER together with the Italian company KLOPMAN INTERNATIONAL SRL. BRÜCKNER says that it meets the highest requirements regarding production capacity, shrinking values and fabric types to be finished.

8



Hall 6
Booth F109

Please visit us !

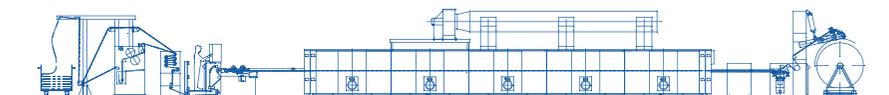
languages are provided at our booth F109 in hall 6, where we will be offering you the opportunity to find out more about our market-leading machines from the Krantz and Artos product lines. This is all part of our excellent service and a reflection of how much we value your custom. We invite you to take a close look at the legendary Krantz Syncro and will be glad to outline the many advantages it has to offer for your business in your own language.

We would gladly like to give you more details of our well-engineered machines. Please visit us at ITMA (Hall 6 / Booth F109) or contact us.

Machine programme and contact information under: www.interspare.com

INTERSPARE
TEXTILMASCHINEN

ARTOS *Krantz*



Still the peak in finishing machinery.

The special features of this line are two consecutively arranged rubber-belt shrinking machines in front of the felt calender. And last but not least BRÜCKNER developed a **new software** supporting the operator to control the stenter as effectively and energy-saving as possible. The heart of this software is a data base which contains the decades of experience with machine parameters in function of the fabric type to be finished. The really used machine parameters can be compared with desired recipes in order to identify waste, energy saving potentials and dormant capacity reserves over freely selectable periods of time.

CHTC Fong's Industries (Hall 10, Stand E101)

will exhibit its latest technology with its brands FONG'S, THEN, GOLLER, and XORELLA (Hall 2, Stand F109) and present its one-stop sustainable solutions. There will be a great number of innovations and we can only introduce a few. In particular interesting seems to be that FONG'S will show its (running) "**JUMBO TEC 3 2T**" model: the TEC Series High Temperature Dyeing Machine, with its premium quality and the focus on "lower cost, higher quality and more eco-friendly".



THEN-AIRFLOW SYNERGY 8 will be on display

The "JUMBO TEC 3 2T" is suitable for different dyeing processes with various types of natural, man-made fibres and its blends, aiming to provide complete solutions in terms of efficiency, energy saving and environmental friendliness.

To take the changing environment situation into consideration, FONG'S launches its **SUPERWIN High Temperature Single Flow Package Dyeing Machine** at ITMA 2015. This new model is to replace the conventional dyeing machine that consumes a lot more water for dyeing in production. Equipped with a new pump and an efficient motor, the dyeing effectiveness is greatly enhanced.

The brand **Then** will present a dyeing machine that can accomplish to handle a whole range of fabrics; from sensitive products up to heavy weights. It's called "**THEN SUPRATEC LTM**".

The combined knowledge and experience of FONG'S and THEN led to a series of new and groundbreaking ideas: The "THEN SUPRATEC LTM" is a hydraulic long tube dyeing machine with a variable liquor

ratio from short in the semi dry mode up to long in the wet mode. And THEN will show the latest generation of its legendary THEN-AIRFLOW Technology, the “**THEN-AIRFLOW SYNERGY 8**”. Furthermore a new **GOLLER ECONOMICA Dye Padder** will be presented. It provides an even dyeing for knitted fabric without crease marks and any other distortion. And GOLLER will show a compartment of its **SINTENSA** washing machine.

And finally **XORELLA** will launch **XO TREND**, a new machine series to complement XO SMART and XO SELECT. With the existing XO SMART and XO SELECT series small capacity and manual handling to fully automatic vessels integrated in transport automation and packing systems from various suppliers can be processed. All machines feature the energy saving XO-heating system and can optionally be equipped with the waterless vacuum system XO “Ecopac” for maximized savings of precious resources.

iNTERSPARE Textilmaschinen (Hall 6 / Booth F109) will be presenting the most recent developments and innovations in its Krantz and Artos product lines for the high-quality finishing of woven and knitted fabrics. The main exhibit on display will be the latest version of the legendary **Krantz Syncro shrink dryer**. iNTERSPARE is very much looking forward to the ITMA 2015 and, with its comprehensive range of high-quality finishing machines made in Germany, hopes to build on the past success of the textile machines produced by Babcock and Krantz.

The company, which for many years has been internationally renowned for supplying high-quality German-made spare parts, will be demonstrating, above all, its expertise in the manufacture of first-class textile machines.

The current machinery range of iNTERSPARE Textilmaschinen includes the Krantz Syncro shrink dryer (ITMA exhibit) and the **Krantz K30 stenter**, both belonging to the Krantz product line.

In the Artos product line, iNTERSPARE Textilmaschinen offers the **Artos Unistar stenter**, the **Artos Vari-Flex dyeing padder** and the **Artos Uni-Flex impregnation padder**.

The exhibited iNTERSPARE Krantz Syncro is – as further development of the Haas Aerovar shrink dryer – an excellent example for German engineering creations. Its unbeatable performance can be admired especially during the drying of knitted fabrics in tubular or open width form up to all fabric weights. Also in drying of woven fabrics outstanding results will be achieved. Without problems it is possible to drive with one or more slim or wide fabric layers side by side. Additionally processes such as drying, shrinking, intermediate drying or drying for formation of fabric can be proceeded here on only one production line.

The shrink dryer allows long reaction times and high overfeeds up to 200 % on the screen belt. This causes a slowly and gentle drying with an optimal stress relieving in the fabric.

The drying can be regulated exactly for each special requirement of the fabric because of different selection possibilities of many parameters.

iNTERSPARE will present a two-compartments-Syncro on the ITMA booth and is looking forward to show all the technical advantages to the visitors and to demonstrate what makes the Krantz Syncro such a unique and amazing machine. Highest fabric qualities will be achieved very economically by controlled shrinkage, development of volume and improvement of the grip.

In the center of the presentation will be the single, best-in-class processes, the patents and overall construction of the dryer as well as the efficient and sustainable production. And there will be new features and modifications to discover. Furthermore iNTERSPARE offers consulting for modification of existing installations. Textile companies using Artos (Babcock, Famatex), Krantz and Stentex branded finishing machines for their production have an excellent opportunity at ITMA 2015 of being updated on innovative modifications to their installations. A consequence of a modification may be for example improved energy efficiency. Not only is greater economy attained but also an improved ecological performance - very important for sustainability strategies by textile producers and the satisfaction of the demands of larger brands and retailers. Another highlight is the presentation by iNTERSPARE of its newest and exclusive innovation, the 'Smart Order System' phone app. The app liberates customers from all research for the correct spare part allowing the customer to save time and money.



iNTERSPARE will present a modified version of the legendary Krantz Syncro

Santex Group (Hall 10 / Booth D101) will present knits finishing machine Santasynpact and the new CAVIMELT "Plug + Play" for coating and laminating. The Santex Textile Division is showing with **Santasynpact** their newest addition to the Santex family of knits finishing machines. The main goal is to provide the highest performance and best fabric quality with minimum production costs. Santasynpact is a combination of rubber belt shrinkage and felt belt compacting unit in one line with levelling frame at the entry. With this new development compaction results are significantly improved and at production speeds 2 to 3 times higher than conventional felt compacting systems. Santex will show the latest version with special designed felt belt features to ensure the sensitive handling of cotton or cotton blended knits and to maximise performance.

Cavitec, a brand name of Santex AG Switzerland is showing their new **CAVIMELT P+P**. It is a streamlined machine developed with the goals of precision, production and cost effectiveness in hotmelt coating and laminating using the rotogravure system. This compact design integrates the unwinder and rewinder in one machine frame, accepting rolls up to 600 mm in diameter and working width of 1600 – 2'400 mm. Operating speed is up to 40 m/min and allows coating weights from 3 – 80 gsm. All well known adhesives in thermoplastic and reactive hotmelts are applicable. The end use of the so produced fabrics are for active wear, automotive interiors, home textiles, technical composites, etc. The machine is delivered pre-wired, assembled and tested. The CAVIMELT P+P stands for Plug+Play, because of short installation and commissioning time.



Cavitec' s CAVIMELT P+P

Thies (Hall 14 / Booth C106) will be presenting the latest product developments, concentrates on sustainable product solutions and focuses on the development of innovative, intelligent and integrated concepts for yarn and piece dyeing.

Thies will exhibit the new yarn dyeing machine, **iCone**, which is ideal for bleaching and dyeing fibres in different forms such as packages, warp beams, combed tops or flock. The latest forms of flow analysis allow the piping system, the pump and the pump impellers to be optimised, reducing pressure losses and therefore lowering power consumption. iCone offers the ability to dye in a traditional manner using reciprocating liquor circulation or else to opt for ultra-short liquor circulation from one side only, and a liquor ratio of 1:3.6. The machine is very practical as it can be matched to the requirements of each application. The delivery spectrum of the iCone is complemented by the very latest, user-friendly control systems. These integrate the in-house developed “green functions” which provide users with standardised programs for exploiting the optimisation potential in different process steps. iCone can be integrated without problems into existing dyeing houses. Existing dryers and material carriers can be adapted after consultation.

The established and successful **iMaster H2O** machine has been further optimised. The 2015 version incorporates various new detail improvements, many of them developed in response to suggestions from customers and users. And Thies will introduce the **iMaster mini** to the world for the first time.

This is a fully-equipped variation of the iMaster H2O able to be used with a load capacity of 20-80 kg for small production runs and laboratory work. One aim is to operate the iMaster mini using the same (parameter) settings as the iMaster H2O production version. Undertaking the testing and optimisation phase on the iMaster mini offers the possibility to incorporate new kinds of fabrics, recipes and processes in the production sequence more effectively and more cost-efficiently. Another version for the treatment and finishing of light to medium-weight terry fabrics is the iMaster F. Its chambers have capacities of up to 400 kg.



The new Thies iMaster mini

Other innovations are the soft-TRD SIII, which combines the perfect running conditions of the famous soft TRD SII with the latest short liquor ratio technology and the MPS-G which is the new, multi-functional supply system for chemicals, solids and dyes.

A very interesting tool seems to Thies **DyeControl**. It allows a transparent analysis of the treatment processes: rinse, wash and dye baths are monitored online and displayed as graphics. The visual representation of the process curves facilitates control of turbidity and determination of the dyeing extract from the liquor.

Xetma Vollenweider (Hall 10 / Booth F106) will present itself as “The Better Partner” in the development and manufacture of machines for the textile surface finishing. The shearing systems of Xetma Vollenweider guarantee, alongside high production speeds, a maximum cutting precision as well as the longest serviceable life of shearing units available. Xetma Vollenweider will exhibit its latest model of **Optima XS1** shearing machine at ITMA 2015. Based on the long-term experience in carpet finishing, Xetma Vollenweider offers customized solutions for the mechanical surface finishing of textile webs in widths up to 6.0 meters. Besides its shearing systems Xetma Vollenweider will present unique finishing systems for pile cleaning and polishing of woven carpets and textile floor coverings.

Printing & digital printing machinery (Chapter 9)

As regards digital inkjet printing, you will find an overview of machines currently available, based on the pre-ITMA status, together with the latest market figures in our separate article. This segment appears simple and straightforward in principle, but on closer analysis proves to be extremely complex, consisting as it does of countless different solutions and machines which are very hard to compare with each other. In this relatively new and rapidly growing segment, which for the first time has now been allocated its own chapter at the ITMA, we can expect a vast array of innovations or even the breakthrough of the industry itself into industrial-level production.

Although very few printers have previously qualified for inclusion in the industrial segment owing to the industry's requirement for a minimum textile throughput of 650 m²/h, it is likely that a number of new printers in this segment will be unveiled at the ITMA. It is important, however, not just to compare speeds, but also dpi resolutions. Low resolutions mean higher speeds. There will probably also be a lot of innovations with respect to the number of colours used, the printheads and the inks. As far as colours are concerned, the colour space will be expanded to include new colours in addition to the classic CMYK range, while black will become richer and dithering will become less obvious or disappear completely.

The printheads differ in terms of resolution, the number of nozzles per colour and the range of droplet sizes which can be sprayed. Of the four ink types, water-based inks are becoming more and more important for reasons of sustainability, and ink drop size and ink delivery are gaining even greater significance owing to increasing production volume. One large manufacturer has already announced a change in its business model: printheads will be replaced free of charge provided the ink is purchased exclusively from the manufacturer. It will be interesting to see whether the trend observed in the paper printing industry, involving the cut-price sale or even the leasing of hardware for the purpose of generating profits from consumables, will spill over into the textile printing industry. Owing to its potential for revolutionary change, this segment promises to be as interesting as it is important. Let's have a look at some exhibitors.

durst (Hall 18 / Booth C103) will launch its new **Alpha series**. Alpha is Durst's next generation of industrial inkjet printers for efficient processes and economic production of home textiles, apparel, furniture and soft signage.



One of durst flagships is the Kappa 320.
Now comes Alpha.



Alpha Series

The Process Innovation for Digital Textile Printing

- Next generation of industrial inkjet printers for efficient processes and economic productions of home textiles, apparel, furniture, soft signage.
- Launch at ITMA 2015 in Hall: 18, Stand: C103
- For on-site appointments: textile@durst.it.

Textile Printing
Durst. The industrial inkjet specialist
www.durst-online.com



durst

Italy · Austria · Germany · Great Britain · Spain · France · Sweden · USA · Mexico · Brazil · Singapore · India

Epson (Hall 18, Booth D101 – D102 – D103) will be presenting solutions for this rapidly growing market in collaboration with For.Tex, a wholly owned subsidiary of Epson, and F.lli Robustelli, a leading player in the development of textile printers.

At the beginning of the textile workflow, visitors will be introduced to **the Epson Stylus Pro 4900** SpectroProofing, a 17-inch inkjet printer which reproduces around 98 percent of all PANTONE® colours by means of its UltraChrome inks while offering high reproduction precision and comprehensive remote proofing functions. The Stylus Pro 4900 is an ideal tool, particularly for the initial stages of the workflow prior to further processing of materials.



The thermo sublimation printer Epson SureColor SC-F9200

The collaborating partners will also be bringing us up to date with the **Monna Lisa** printer. Based on Epson's Piezo inkjet technology (Micro Piezo printhead technology), this machine revolutionised textile printing back in 2003, thus acquiring worldwide renown. The latest version features some additional innovative performance tools.

The thermo sublimation printer **Epson SureColor SC-F9200** unveiled in May 2015 will also be on display at the stand. This printer is suitable for all standard thermo sublimation papers and produces a wide range of garments, sportswear and home textiles. The Epson is fitted with PrecisionCore technology and two TFP printheads.

In addition, visitors will be able to view the **Epson SureColor SC-F2000 DTG** printer in action. This compact machine prints directly onto garments and can be used for personalising T-shirts, polo shirts and other textiles.

Mimaki (Hall 18 / Booth C104), a leading manufacturer of wide-format inkjet printers in the sample and "low-Segment", will be introducing a brand-new direct-to-textile inkjet printer. Mimaki will debut the Mimaki **TX300P-1800**, an innovative 1.8 meter roll-to-roll direct-to-textile inkjet printer. Its predecessor, the Tx2-1600, has been used for textile printing worldwide for the last 14 years. The new TX300P-1800 is designed to meet the market demand for smaller lot sizes, faster delivery times and the ability to quickly produce samples.



Corporate sponsor



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Technology Session Sponsor



Lunch sponsor Drinks Reception Sponsor



Location:

Stella Polare Convention Centre,
Fiera Milano Rho, **Franci Room**

The Next Stage: Latest Advances in Production Inkjet Printing

ITMA 2015 is expected to showcase new technologies representing a step change in the capability of industrial digital textile printing and further expanding the commercial opportunities in this already booming sector.

The WTIN Digital Textile Conference @ ITMA will offer details insights into these innovations across applications that include fashion, home and technical textiles.

15th November 2015

Registrations open.
www.digitaltextileconference.com

Event
Organiser



Mimaki envisions a day not too far in the future when consumers will be able to download or create their own patterns rather than being limited to commercially available designs. The TX300P-1800, which is available with a variety of ink types and produces very high quality, is ideal for this new distributed model of textile printing.



The new Mimaki direct-to-textile inkjet printer TX300P-1800

Designed specifically for direct-to-textile printing, the Mimaki TX300P-1800 8-colour inkjet printer features a new printhead that ejects ink droplets at high speed to ensure accurate ink droplet placement with a high head gap. This makes the printer ideal for printing high quality images on all types of fabrics, including thicker and textured materials.

The TX300P-1800 comes with a print resolution of up to 1080 dpi with drop sizes ranging from 6 to 24 pl. Small droplets create beautiful high-resolution printing, and large droplets are useful for high-speed printing. The print speeds is up to max 68 m²/hour.

A choice of sublimation dye, disperse dye, pigment, reactive dye, and acid dye inks to meet a wide range of application needs. Sublimation dye inks are available at commercial launch with other inks following soon. 2-liter ink packs are available for uninterrupted printing on longer runs.

SPGPrints (Hall 18 / Booth E103) will launch of its new single-pass digital textile printer 'Pike®'. The company has has opened its doors to key customers for 'sneak' preview in September.

The Pike® is based on a full-width array of Fujifilm Samba print heads, specially modified in a joint project for optimum performance in textile printing. The heads are incorporated in a highly accurate but user-friendly print-bar technology, called 'Archer®'. One essential advantage of the technology is that the Archer® Technology can jet accurately across a distance much greater than can other heads widely used in current digital-textile applications. The head plates in the Archer® array will typically be 4mm away from the surface of the substrate, compared with the typical 1.5mm of other print heads – so greatly reducing the risk of 'head strike', which can damage these expensive components.

SPGPrints has also developed Pike® Reactive inks, with a formula that eliminates the mist problem, which might have arisen with this greater firing distance. The first Pike® printer is a 6-colour machine in which each colour is represented by an Archer® print bar containing 43 print heads, giving a printing width of 1850mm.

The print bar has a native resolution of 1200 x 1200dpi, variable drop sizes from 2-10pl and a jetting frequency of 32 kHz, which together deliver typical productivity of 40 linear metres a minutes, with a maximum of around 75 m/min. The modular construction will allow models with up to 9 colours. Wider versions of the Pike, up to 3200mm, are also planned.



The new SPG PIKE digital printing machine

The Archer® print bar has been designed to retract fully for easy maintenance. Heads can be purged in narrow segments and a faulty head can be replaced by users in less than an hour, with no need for manual alignment – simply software-based registration. The heads are manufactured by a MEMS process, which means they are less liable to degradation and can be refurbished.

With the cost of head replacement identified as a major concern for investors in fixed-array machines, SPGPrints proposes a unique arrangement in conjunction with Pike® inks, in which the customer will initially receive a number of spare heads and any faulty heads returned will be replaced free of charge.

The Pike's fabric-infeed system is by Erhardt + Leimer and the transport blanket has been specially designed in conjunction with Habasit. The in-line dryer has the extra capacity to handle disperse inks, which – along with acid inks – are in development and scheduled for launch in 2016.

Machinery for web formation, bonding and finishing of nonwovens (Chapter 3)

For a long time, the nonwovens field was a hidden champion of the textile industry, but it is now coming to the fore as a growth market with high potential. Numerous industries, including the automobile sector, have been making successful use of nonwovens for many years and plan to increase their reliance on these textiles, as nonwovens not only offer countless solutions for cars, but are also easier to recycle than many other materials.

In the field of nonwovens, we are expecting numerous innovations aimed at increasing productivity, improving handling between the individual machines and processes, optimising the use of yarns and avoiding waste. New solutions facilitating the straightforward reuse of industrial waste are also a topic of considerable interest for many users and should form an integral part of any sustainability strategy. Further impetus for greater sustainability is likely to be gained from the use of more sustainable yarns. The aim here is to optimise machines and processes for biologically compostable natural fibres and recyclable man-made fibres. Ultimately, the prime purpose of many innovations will be to improve the quality of the nonwovens produced. New machines have been announced, for instance, by several manufacturers of carding machines, needle looms and cross lappers.

The Autefa Solutions Group (Hall 3 / Booth A 102), which unites the brands Autefa, Fehrer, F.O.R., Octir and Strahm, will present a wide range of new developments. One is the new generation of nonwovens cards. The **new card** is specially developed and designed for high production speeds, tailored to the worldwide requirements of Nonwoven Lines. A unique construction enables an easy accessibility of the card which results in considerably reduced cleaning and maintenance periods and a much higher efficiency.

The new crosslapper Topliner **CL 4004 SL** is characterised by a high infeed speed of up to 150 m/min and a precise weight distribution. These advantages are very important especially for applications in spunlace lines. The lapping of the web layers is continuously monitored, which minimizes rejects and saves material.

For the significant material saving the crosslapper Topliner already received the VDMA Blue Competence Award. Autefa Solutions extends its belt dryer portfolio with machines for the high temperature range of up to 500 degrees Celsius. These drying machines are applied in wetlaid lines. In Milan a modified **HiPerTherm double belt oven** for the thermal bonding of crosslapped and aerodynamically formed webs is shown.

For mechanical web forming Autefa Solutions offers the **Needle Loom Stylus**, which is available both with and without Varilipic drive.

Furthermore the **Automatic Needle Exchanger 2.0** is shown at ITMA. It enables a fully automatic process of needle exchange without manual intervention. Material saving, optimum resource utilisation and the need for multiple utilisation cycles are an important contribution to sustainable manufacturing processes.

And Autefa Solutions will present a new **modular tearing concept** for the first time. The tearing machine **UniRec** is based on a modular design with 1-5 available opening units, which was developed for recycling of nonwovens and waste with a high degree of special fibers such as carbon, aramids, glass-, natural and synthetic fiber blends. The business branch Woollen Carding Technology with the brand name Octir is the market leading manufacturer of cards for long staple (natural and synthetic) fibers.

In the last 2 years the company has supplied more than 30 woollen carding sets for cashmere spinning and 6 cards for semi worsted spinning, to famous spinning mills.

Extremely interesting seems to be a solution business branch **Fiber Logistics Technology** of Autefa Solutions which increases the potential in the supply chain of fibers. The transfer fork **UNI-FORK** and the wrapping machine **AD-WRAP** are worldwide unique and protected by a patent.

Together they build a system which stands for a strong reduction of personal costs, a high availability of the line and a short amortization period. Being a market leader of automatic fiber logistics and manufacturer of hydraulic fiber bale presses, Autefa Solutions presents with the **UNI-FORK** a machine which optimizes the process of pressing a bale, increases the efficiency of the process and improves the quality of the fiber packing.



The Autefa Solutions Automatic Needle Exchanger 2.0

Visit us at ITMA,
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STRAHM



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The DiloGroup (Hall H3 / Booth C104) traditionally exhibits complete lines to show the latest developments in all components, as a leading company in the field of complete staple fibre nonwoven production lines. This includes fibre preparation (opening and blending) from DiloTemafa, card and card feeding from DiloSpinnbau, followed by crosslapper and needlelooms from DiloMachines.

In Milan DiloGroup will exhibit two complete lines to show the broad scope of its portfolio on a total booth area of 1.232 m². Dilo will show a staple fibre needling line for the production of technical textiles in wide working width which is especially suitable to produce for example geotextiles. Fibre preparation from DiloTemafa starts with a bale opener BTDL of the latest design which is suitable for processing longer fibres. The subsequent carding willow KW combines in the preopening stage good preblending and preopening with highest throughput.

It is also designed for processing longer fibres. New design elements allow longer cleaning intervals with reduced cleaning time. The subsequent dosing opener DON feeds the fibres via its fine opening stage to the newly developed card feeder type VRS-P.

The **new card feeder VRS-P** feeder combines the principle of volumetric precisely charged feeding, with the characteristics of a vibration chute feeder and eliminates a conventional large trunk (on the top). This results in a better and more homogeneous distribution of the fibre flocks. Furthermore, a lower ceiling height of the building reduces the costs for the construction of the factory and its operating expenses. The fibre flock matt is condensed by a vacuum delivery apron for a better uniformity of the fibre mass distribution. Additional flaps control the fibre distribution over the working width. Card feeders of the VRS series are especially adapted for medium-fine to coarse, and medium to long staple fibres.

The newly developed card “VectorQuadroCard” incorporates a completely new “modular transfer group” between breast and main section. The flexible and quick change of this “transfer group” makes possible three different card types. The type **VQ-Q** with a “Quattro group” to improve web evenness and fibre blending, arranged as a double transfer between preopener and main cylinder with two doffers and two transfer rollers to the main cylinder.

Or the type **VQ-V** with a top doffer together with a transfer roller and a lower transfer roller to increase the throughput by using the “doubling effect” between prepener and main cylinder. Or the **type VQ-T** with only one transfer roller between prepener and main cylinder.

The model series VQC uses 4 worker/stripper pairs of rollers on the prepener and five worker/stripper pairs on the main cylinder. Furthermore, the delivery system is also very flexible and may be combined in the variation with two doffer rollers and respective parallel delivery system or with pairs of doffer rollers and condenser rolls top and bottom or as random card with random rollers, doffers, condenser rolls and take-off rollers.



The universal model series “**VectorQuadroCard**” comprises variable components for all kinds of applications. Focus is laid on high throughput with good web quality. The “VQC” exhibited at the show with a working width of 3.2 m is designed for the geotextile sector.

The **new crosslapper type “Super-DLSC 200”** allows electro-mechanical speeds of up to 200 m/min for web infeed speeds, depending on the fibre specification. It aims at reducing a possible bottleneck for the total throughput of the complete installation. At the crosslapper infeed Dilo has installed the proven “CV1A” web regulation system for an improved evenness of the needlefelt with a great potential for fibre savings. This very high web infeed speed has been made possible by a further increase of the drive power within the “3-apron-layering technology”. All drives for the aprons and the layering carriages are direct water-cooled torque motors to improve the acceleration with reduced gear wear. In addition, we have taken special measures to eliminate and reduce apron vibrations in order to achieve an exact web overlapping (lap joints).

Dilo will show two complete lines with many new machines

Furthermore, they have installed a “web guiding system” (FLS) to avoid wrinkles for example at the speed change of the upper carriage. The web infeed width is 3.2 m, the layering width is 7.0 m.

After the crosslapper, Dilo will show a **new needleloom type DI-LOOM OD-II AB with CBF feeding system**. When designing this model series, Dilo has laid special emphasis on cost effectiveness in the preneedling machine.

The model series DI-LOOM AB has a very favourable price-performance ratio. In addition to wide needling lines for the economic production of large volume products as in the geotextile industry, Dilo will show a compact line which is designed for the production of small amounts of high quality felts used in the medical sector and for specialty felts made from fibres such as carbon. The working width of the compact carding machine is 1.1 m, the layering width is 2.2 m.

The needleloom of the compact line is the first to use needle modules. The needle module technology has been designed especially for the intense needling of the model series Hyperpunch and Cyclopunch in order to allow an economic needle insertion of these boards with more than 20.000 needles/m/board. The compact needle loom shows the module technology in a classical fishbone arrangement, each module comprising 22 needles. A graphic simulation shows the automatic insertion of the needle boards in the “Modulmaster” using needle modules. Development work will be finished during the coming months.

These new approaches illustrate the economic effectiveness of module technology. Furthermore, the insertion speed and precision are considerably increased by “X22 module technology” compared to single needle insertion.

And finally the new “**Variopunch technology**” is based on a modified needle module technology which can erase bad spots in the felt by a variable needle arrangement in order to achieve a better evenness of the stitching pattern. The basics of the completely new needling technology **VPX200** will be presented with the aid of graphic simulations. Variopunch allows a very homogeneous distribution of stitches for better surface quality in automotive applications. Dilo will show numerous needlefelt samples for many different applications in hall H3 at booth No. C104. Members of the Dilo sales department with around 50 people present will be ready to receive customers and interested parties. Reading all these unbelievable innovations Dilo will introduce at the ITMA we think that we will need to plan a whole day for watching and experience all the single machines and understand the new processes. However, we will do our best.

Groz-Beckert (Hall H7 / Booth D124) will present for the first time its new product sector Carding. The sector will exhibit metallic card clothing characterized by minimizing fiber consumption and, therefore, guaranteeing an economic production of nonwovens. SiroLock® and EvoStep® wire designs for doffer and worker wires are displayed on a nonwovens card made of acrylic glass. SiroLock® and EvoStep® are characterized by a distinctive step under the tip of the tooth front.

These geometries allow a better fiber taking and holding, while reducing flying fiber and improving the fiber blending.

The combination of these advantages leads of a better web quality and allows to save raw material. In addition to these highlights for the nonwoven segment, also for the spinning segment, on an acrylic cotton card, Carding shows a special doffer wire for the processing of microfibers with a rib of 0.70 mm and 520 PPSI allowing a reduction of yarn imperfections (IPI-values) by up to 30 %.



Groz-Beckert SiroLock

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Oerlikon Neumag (Hall 4 / Booth A 105) will concentrate on its nonwovens core competencies and present all interested visitors with the latest product developments by means of its virtual reality technology in the 3D showrooms. Furthermore at the Nonwovens Forum on 16th November Oerlikon Neumag will talk about its innovations in ‘Spunbond Lines for Technical Applications’. Martin Rademacher, Sales Manager, and Dr. Ingo Maehlmann, Senior Manager Product Management Nonwoven, will talk about the polymer and technology trends as well as growth expectations for technical applications. They will also present their case study: “bitumen roofing substrate and geotextiles meeting market requirements”.

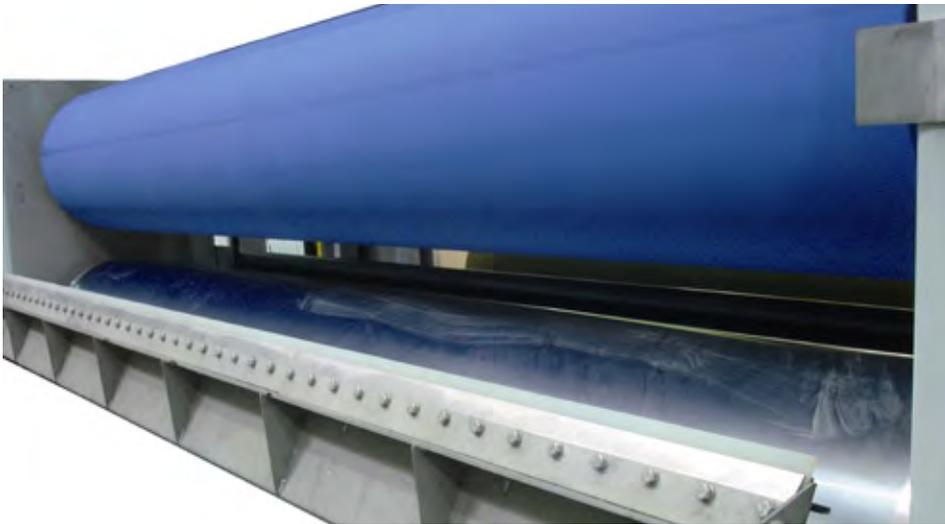


Oerlikon Neumag Spunbond Technology for Technical Applications

Trützschler NONWOVENS (Hall 2 / Booth C113) focuses on the variety of manufacturing processes, especially concerning web bonding, in addition to total system concepts. Individual components and models demonstrate innovation in spunlacing, needling as well as thermal and chemical bonding. The range of topics includes the modular AquaJet, an efficient dryer, the new, patented structuring process for the thermo bonder, quality increase in needling, and the high-speed foulard for ADL systems.

The significant speed advantages of the newly developed liquid foulard are based on special geometries and roll surfaces. The result is an increased economic efficiency in the production of light-weight, chemically bonded nonwovens. A new product is a thermobonded nonwovens with 3D effect and large volume that can be produced in-line in the Omega oven with special equipment.

Voith Paper, the cooperation partner for wet laid, hydroentangled nonwovens, is also represented on the Trützschler stand. Together with the AquaJet, the dryer and winder from Trützschler Nonwovens, the Voith HydroFormer results in a powerful machine combination whose application goes far beyond the production of flushable wipes.



Trützschler NONWOVENS high-speed foulard for ADL systems

Other suppliers

SETEX Schermuly textile computer (Hall 14 / Booth H 105), the worldwide operating high-tech corporation that realizes and develops computer based control systems and software solutions for the textile industry, will show several new developments. In the center of the exhibits will be the world premiere of the new S380 and E380 generation of control systems. It will come with Multitouch, drag-n-drop program designer, web-userinterface and much more interesting details to discover. Furthermore there will be the release of the OrgaTEX X1 software, which offers a new recipe management and a new formula assistant to simplify complex production processes. Another highlight will be the launch of the new SECOMmobile App which is the mobile solution to monitor all information about the system state of machines and batches.

And last but not least SETEX Schermuly will present a new version 3 of their FabricINSPECTOR und CamCOUNT. These are the new camera systems to control the thread frequency and the shrinking of woven and knitted goods.

Conclusion

This brings us to the end of our preview of the ITMA 2015 in Milan, including the exhibitors and machines. Organisation, innovation and dialogue will undoubtedly make the ITMA 2015 an event which meets the expectations of exhibitors and visitors alike. And it will be another four years before we have a renewed opportunity to find the same concentration of technical expertise from the textile machinery industry spread over an area of one square kilometre. Finally, we'd like to give you one more piece of advice: Spare a moment to take a look at the stands of the countless small-scale exhibitors. These companies often fall under the radar because they are not really able to market their innovative ideas and products and make a poor press work. They nevertheless have some clever solutions and a wealth of know-how.

Whatever your goals, the fair is certainly worth a visit. We for our part are already very much looking forward to the ITMA with its many innovations and events and, as always, will be keeping you up to date via the TexData Infoletter. And in issue 1 / 2016 of the TexData magazine, you will find a comprehensive report containing all the information about the ITMA that we have been able to compile on your behalf.

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***Interview with:
André Wissenberg***

***Vice President, Head of Marketing,
Corporate Communications and Public Affairs
Oerlikon Manmade Fibers Segment***

***“Our solutions increase our customers’
competitiveness and enable a faster return
on investment than with other solutions!”***

Mr Wissenberg, how important is the question of sustainability in the corporate culture of your VDMA member company, the Oerlikon Manmade Fibers segment?

Mr. Wissenberg: Sustainability has always been a very important consideration in the Oerlikon Manmade Fibers segment. Not only the development of new products and customer solutions, but also the production, manufacture, assembly, sales and service activities of all our 2,500 employees worldwide are informed by the requirement to protect and deal responsibly with resources and colleagues. For precisely this purpose, for example, we launched our „e-save“ programme in 2004, which has since been expanded systematically with further initiatives in the „Health, Safety and Environment“ sphere.

What advantages do your own employees derive from a corporate self-image in which sustainability plays such a vital role?

Mr. Wissenberg: Sustainability relates to the three areas of financial, ecological and social activities. In each of these, we are working all the time and everywhere on improvements, not only for our customers, but also and particularly for our employees. Regarding production, for example, in the last few years this has taken the form of the group-wide Oerlikon Operational Excellence Programme, under the auspices of which we have implemented corresponding process improvements at all our production sites.

In Remscheid, the recently developed one-piece flow concept was used both for the new WINGS POY 1800 assembly line, and for the production of the change bars, which resulted in an increase of 15% in production capacity and ergonomic benefits for the assembly personnel. At the same time, energy consumption was reduced. We also use these experiences at our other sites in Germany and abroad, in China, India and the US. We are also very active with regard to health management. Age-appropriate workplace optimisation, redesigning break rooms and even ensuring healthy eating options are just some of the ways in which our employees benefit from the approach.

What financial and human resources are available to your segment for “Research and Development” (R&D)?

Mr. Wissenberg: The Oerlikon Group as a whole invests continuously in innovations that will strengthen its position as a technology leader. In 2014, R&D spending reached CHF 121 million, which was 19.8% higher than the previous year and is equivalent to about 4% of turnover. In concrete terms, R&D activities were reflected in 108 patent applications in the last year.

As the global market leader in filament spinning systems for chemical fibres, texturing machines, and systems for BCF, staple fibre spinning and nonwovens, our Manmade Fibers Segment offers solutions that span the entire textile value added chain.

We offer our customers technologies at the leading edge of the industry at all times. With annual R&D investments of about CHF 30 million, over 200 engineers and almost 1200 patents, we have been cultivating our innovation leadership in the chemical fibre industry for decades.

Are your customers happy to pay for sustainable technologies and improved energy efficiency in the two brands?

Mr. Wissenberg: Yes, because our solutions increase our customers' competitiveness and enable a faster return on investment than with other solutions, some of which are supposedly less expensive at first glance. In the medium to long term, therefore, customers who use our technology solutions are substantially more successful, with regard to both profitability and quality.

What is the idea behind the „e-save“ philosophy and its four subsections?

Mr. Wissenberg: The technological leadership position of the Oerlikon Manmade Fibers Segment is based on a corporate culture in which great importance is attached to future-oriented developments and close partnerships. Superior performance, innovative energy, integrity and team spirit are the values that characterise our daily work, and our employees take pride in being measured by the results of these.

Through the constant expansion of our „e-save“ philosophy, we are continuously adding and increasing value with high-quality, innovative solutions for the chemical fibre industry. Our name is a byword for the finest expertise in our industry, based on more than 90 years we of experience in every aspect of chemical fibre production technology. Today, all of our innovations in product and technology are developed with consideration for the four elements of „e-save“- energy, economics, environment and ergonomics. This creates the conditions in which our customers can ensure their sustained success in the market.

Is it possible to quantify the magnitude of the energy savings that are realised in textile production by using the latest machines from your segment?

Mr. Wissenberg: The contribution of our product solutions to sustainable, economical production is substantial, particularly for chemical fibre spinning. Here are two examples for you: Our latest WINGS technology (Winder Integrated Godet Solution) reduced average energy consumption by 40% per ton of the POY yarn type (Pre-oriented Yarn). For the FDY yarn type (Fully-drawn Yarn), this reduction is as high as 55% compared with the systems produced in the mid-90s. As you can see, our most recent solutions are exceptionally energy efficient.

Furthermore, our new technologies also improve productivity: another example should illustrate this. With the latest model of the WINGS FDY 32-end yarn winder is 2.6 times more efficient than its predecessor the ACW FDY 12-end. This was achieved to a large extent by the greater number of yarn ends and optimisation of the production process. The potential for savings with the POY winder is in a similar range.

How are you able to minimise the negative influences of industrial production?

Mr. Wissenberg: Industrial production inevitably affects the environment. By systematically minimising these effects, we acknowledge our responsibility to ensure a liveable future. Our German sites, in Remscheid, Neumünster and Chemnitz, are all certified to DIN ISO 50000-1. We have imposed strict energy management regulations, which must ensure that energy consumption is reduced by 1.5% per year. The recovery of drilled oils from machined metal by centrifuging or reconditioning lubricants, waste recycling and energy recovery with heat exchangers are other examples of how we handle resources for sustainable results.

These aspects are just as important to us on the customer side: The manufacture of textile products and the components, machines and systems used for this are traditionally associated with many unfortunate environmental consequences. By applying the latest in scientific and technical expertise, we help to reduce these negative effects to a minimum.

Some of the ways our products do this include using all raw materials involved in the production process as efficiently and effectively as possible, significantly reducing emissions, optimising energy footprints, and in some cases considerably reducing space requirements.

What innovations can the textile machine industry expect from the Oerlikon Manmade Fibers Segment in the foreseeable future?

Mr. Wissenberg: We have already seen the successful market introduction of two innovations since the beginning of the new year. One was the new, highly efficient rotating tangling unit RoTac³. Depending on the yarn type, this machine uses up to 50% less compressed air. The other was the new VarioFil rPET with WINGS POY, the result of a close cooperation between Oerlikon Barmag and our daughter company BBE Engineering. We are always working on new technology and service solutions in all product lines, so we can offer our customers solutions that will help them remain competitive in the future.

Will you be exhibiting new textile machines or systems from Oerlikon Barmag and/or Oerlikon Neumag at the ITMA trade fair?

Mr. Wissenberg: In an ITMA Europe year, most companies devote a great deal of energy to market launches at the industry's foremost trade fair. And we are no different.



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At this point, without giving too much away I can say that we will certainly be introducing new solutions for filament spinning in Milan. This year we have also used Techtextil in Frankfurt to exhibit our entire technical textiles portfolio and to discuss individual industry solutions with our customers in industrial yarn, tyre cord, filtration or geotextiles for example.

What is your strategy for responding to China's aspirations to become one of the primary markets for textile machinery after developing its own high-tech production?

Mr. Wissenberg: In practically all technology fields, we operate in oligopolistically structured markets, and here in filament spinning for example we have a global market share of over 50%.

In the BCF market, our market share is over 80%. We are observing the emergence specifically of Chinese competitors very closely. We protect our expertise through a rigorous patenting structure and by responding to violations through our international IP department. The major production processes remain unchanged in principle for relatively long periods, so in order to be able to offer convincing products in today's high-tech field any competitor would need to develop a quite revolutionary new process that does not rely on our patented methods.

What persuaded the Oerlikon Manmade Fibers Segment to join the VDMA's „Blue Competence“ sustainability initiative?

Mr. Wissenberg: As a pioneer in matters of sustainability in our industry, it seemed quite logical to combine the message of our „e-save“ programme with the wider „Blue Competence“ campaign launched by the VDMA in 2012. This yields synergies for both sides, and we are able to market the VDMA initiative globally at the same time and thus also provide strength to our German location.

A professional portrait of Eric Schöller, a middle-aged man with grey hair, wearing a dark suit, white shirt, and red tie. He is smiling slightly and looking directly at the camera. The background is a blurred office interior with large windows.

***Interview with:
Eric Schöller***

***Managing Director,
Groz-Beckert KG***

“We are committed to sustainability ourselves, and we want to support this approach among our customers with our products.”

„Sustainability meets profit“ will hang like a banner over the world’s largest textile machinery trade fair, the ITMA, in Milan in November. Groz-Beckert supports this concept with...

Mr. Schöller: ... the presentation of several product innovations representing the issues of conserving resources and raising productivity. At Groz-Beckert, the guiding principle of sustainability is informed by acceptance of our ecological, economic and social accountability as well as profitable growth. For this reason, we are also committed participants in the VDMA’s „Blue Competence“ sustainability initiative, which has become a powerful network of 400 partners in a concerted effort to make sustainable products with sustainable production. Accordingly, at the ITMA Groz-Beckert will present products and innovations associated with the topics of process capacity utilisation, resource conservation and energy reduction.

Can you give a few examples?

Mr. Schöller: For example, at the ITMA we will present new modules in our expanded warp knitting range. When they are used together with a Groz-Beckert knitting machine needle, perfectly coordinated tools are guaranteed. This in turn means that processes run smoothly in every sense, and are not interrupted by errors, thus ensuring maximum productivity while conserving resources. Another example is the Sewing service concept⁵, which also encompasses the Supply, Solutions, Service, Superiority and Sustainability sectors.

As a partner, Groz-Beckert assists its customers throughout the entire sewing process. In this way, we create the best possible conditions, not only for making the right product choice, but also for perfect needle handling, and thus also profitable production. Another example is the EcoStar needle used to make nonwovens. When used, it reduces energy consumption by as much as 7 percent, and it has a considerably longer service life.

Resource protection begins at the product development stage. What can users expect from the new generation of „Litespeed Plus“ needles?

Mr. Schöller: In order to be truly effective, sustainability must be a way of life at every workstation. This is why in the last few years Groz-Beckert has continuously lowered its emissions and energy consumption while still raising productivity. We are committed to sustainability ourselves, and we want to support this approach among our customers with our products.

We have been extremely successful in this with the new generation „Litespeed“ needles for high-performance circular knitting machines: The further improved shaft geometry reduces friction and wear substantially. As a result, we achieve much higher productivity, enormous energy savings and a reduction in our CO₂ emissions.

Sustainability as sales argument. What orders of magnitude are we talking about?

Mr. Schöller: When „Litespeed Plus“ needles are used, it has proven possible to lower the machine temperature and energy consumption by up to 20 percent. With a single needle set consisting of 3,000 needles, knitting mills in China have recorded a CO₂ reduction of 1.4 tons per year, in India this figure was found to be over 2.4 tons. For the sake of comparison: In order to create an equivalent quantity of nitrogen emissions, you would have to fly 3,800 or 6,400 kilometres respectively. To give you a better idea of the scale of the impact this one innovation could have: If all the circular knitting machines in the world were equipped with these significantly lighter Litespeed needles, carbon dioxide emissions could be reduced by 475,000 tons year after year.

At the beginning of the year, Groz-Beckert acquired the worldwide carding operations of the Bekaert Group. Will the new Carding sector be represented at the ITMA already?

Mr. Schöller: Visitors to the ITMA will find a completely new trade fair concept at our stand; of course our new Carding product sector will also be represented there. With carding, we have made an important addition to our product and service portfolio relating to all aspects of our Knitting, Weaving, Felting, Tufting and Sewing sectors. This acquisition provides Groz-Beckert with access to the spinning industry for the first time.

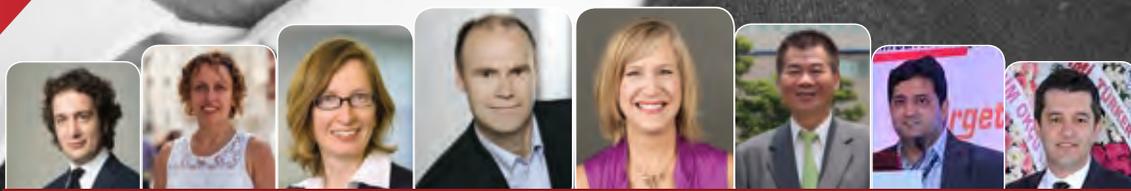
It also enables us to offer a full range of products and services in the field of carding from a single supplier: from consulting and recommendation of products from the entire portfolio to assembly and roller repair and even including a commissioning service.

Groz-Beckert has supplied the nonwovens industry with felting and structuring needles, and with jet strips for hydroentanglement systems since 1980. We even have several years of experience in servicing metallic card clothing already. So the new products and services supplement our existing portfolio perfectly, and will serve as the source of many synergies and development opportunities in the future.

Does Groz-Beckert also work with textile research institutes?

Mr. Schöller: Cooperations with textile research institutes offer the chance to jointly develop discoveries that have been made in basic research – Groz-Beckert most certainly takes advantage of these chances. We have good, long-standing relationships with a number of textile research institutes, including for example the ITV in Denkendorf, the ITM in Dresden or the ITA in Aachen. The nature of these scientific cooperations is also highly diversified. For example, the ITA in Aachen was our research partner in developing a textile-reinforced concrete bridge. The bridge has stood in Albstadt since 2010 and is still the longest of its kind in the world.

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*detailed programme will be announced shortly

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3D textile printing is beginning to make headlines. Are your developers monitoring this trend?

Mr. Schöller: Yes, even though 3D textile printing is still rather in its infancy and is being driven mainly by small fashion labels and technology freaks at the moment, I believe it has enormous potential. Particularly with regard to technical textiles, such as inelastic structures, 3D printing technology will establish itself in technological fringe areas of the textiles industry – and I expect it to happen within this decade.

One last question about your innovation strategy. Or to put it another way, how did a manufacturer of industrial machine needles hit on the idea of building textile bridges?

Mr. Schöller: As we assess potential growth areas in the textile industry that are relevant and represent a fit for us, besides the interesting subject of filtration we are also investigating composite fibres for lightweight construction. This led to our undertaking to build the Albstadt textile reinforced concrete bridge using glass fibre composite.

With a span of 100 metres, the bridge is the largest of its kind in the world, and its lightweight construction has attracted hordes of experts. On this basis, we founded a subsidiary company in 2013. solidian GmbH is now responsible for all activities relating to textile construction. It manufactures textile reinforcements of glass or carbon fibres.

These are used in the building of textile-reinforced concrete bridges, façade panels and ready-mixed concrete parts, for example. These products already play an important part in maintenance.

...: over 130 units
... TR
... Sublimation
... ink

Digital inkjet printing (part II): the machines

The ITMA 2015 due to take place in Milan is just around the corner, and one of the segments promising to be of most interest is digital textile printing machinery. Following on from the general technology overview published in our last issue, we now wish to give you a brief run-down of a few machines from leading manufacturers.

This will place you in a better position to judge the innovations at the ITMA while also providing you with a good, albeit non-exhaustive market overview of the latest technological developments. But first, there's something we'd like to mention in connection with a previous report.



In the last issue of our magazine, we took a look at the market, the market segments and market growth. In the process, we pointed to the differences in the figures and attempted to weigh up the figures from individual segments against each other. The result we presented in our report was not entirely to our satisfaction, which is why we decided to contact WTiN for a detailed explanation of their figures and methods that would enable us to provide you with reliable up-to-date figures here. WTiN Analyst James Rankin was soon able to allay our concerns, and based on his detailed analysis we are fully convinced that both WTiN's data collection and the analysis algorithm comply with the highest possible standards.

Here's where the difference lies: While many analyses of the market are based on estimates and forecasts, WTiN works very closely with technology OEMs when collecting data and is thus able to obtain very precise figures about the machines supplied in the market as well as the textiles produced on them. The data collected from the manufacturing partners allows them to gain an un-paralleled view on the market and provide the industry with reliable and consistent market information.

In the industrial segment in particular, WTiN is familiar with every single machine supplied and is therefore able to deliver excellent figures. Moreover, WTiN's figures are updated every six months by means of follow-up surveys, with the result that market participants are kept continually up to date.

James Rankin has made a few of these most recent figures available to us. "The first half of the year saw growth remain at consistent levels, as it stands the market grew by 74.5million sqm over the 6 months with the largest increases being seen in the Southern Asian markets, where traditional textile printing remains dominant. This figure puts the market on track to grow by 24% for 2015 but potentially we could well see this figure rise to 27% if key growth markets maintain growth above 30% for the year as we have seen so far.

Sublimation printing remained the largest sector of the market in early 2015 despite increasing use of reactive ink printing and an ever quickening uptake of pigment inks on high-end machines. We are seeing an increasing number of high-speed-transfer dye-sublimation machines in particular enter the market from manufactures in both Europe and Asia, as sportswear printing remains a popular use of the technology in Asia. At a global level the data continues to indicate that the High Speed segment of the market (with machines running at production speeds between 50 sqm/hr and 650 sqm/hr) makes up the majority of production with a growing presence during the 1st half of the year pushing its share to above 63% of production. In a similar sense when we look at production capacity from a price band point of view we still see the most important sector by far falling to machines priced between \$250,000 and \$749,999. An area of the market that sees relatively few machines but makes up over 45% of global capacity.

Western Europe, as expected, saw a major slowdown in growth, but this was partially offset by the growing presence of digital printing in Eastern Europe, which, while it still predominantly uses low-volume machines, has increasingly seen the installation of high-volume printers. When we look more closely at Asia, China remains the driving force, with growth maintaining higher rates than expected and with very little slowdown in digital textile printing despite the challenging economic climate. It appears that increasing environmental pressure and a desire to remain competitive against cheaper rivals has helped both domestic and foreign manufacturers of digital printers of the last 6 months in this area of the world.

One interesting trend which we are increasingly seeing is the use of fine-detailed patterns and the demand from brands and fabric designers for higher quality designs. In Western markets the reduced lead times and smaller runs that digital allows has led many along the decision path to digital textile printing, while in Southern Asia printers are increasingly using digital for high-volume runs, to allow them to meet the changing demands of designers wanting the fine colour gradients and complex patterns much more suited to a digital print head. This factor, more than any other, may well be what helps to push digital technology into the mass market going forward.”

Those of you interested in further or more detailed figures should take a closer look at the excellent analytics product offered by WTiN or contact James Rankin directly.

The “WTiN Analytics Digital Textiles” product aggregates both market insight and real market data to provide subscribers with a reliable source of information on the digital textile market.

Now let’s return to the machines. We have grouped them together in the different categories (“low”, “high” and “industrial”) and then subdivided the “low” category into the segments “thermotransfer”, “direct-to-fabric” and “direct-to-garment”. This makes it easier to draw comparisons and differentiate between various solutions and areas of interest. What we wish to focus on here are digital textile printing machines belonging to the “high” and “industrial” segments; we will be disregarding the field of “soft signage”, as we do not see it as being well established in the textile industry’s supply chain.

d-t-g category

Epson offers the DTG SC-F-2000 printer for digital printing directly on t-shirts. Its single platen makes it easy to print onto fabric and its height is adjustable to achieve precise results on fabric up to 25mm thick. The printed area on fabric is soft, making t-shirts comfortable and hard wearing. Featuring Epson’s PrecisionCore TFP printhead, with a resolution of up to 1440x1440dpi for accurate dot shape and placement, its wide colour gamut produces vibrant colours and smooth gradations. This DTG printer can print a single t-shirt in 27 seconds¹ making production quick and easy

Kornit Digital is offering direct-to-garment printing systems from entry-level through to industrial production scale, all based on Kornit's innovative NeoPigment™ inks and process. Kornit NeoPigment inks deliver a large gamut as well as a leading performance and fastness levels: using the NeoPigment technology eliminates the need for external pre-treatment or preparation processes. Kornit inks meet the most rigorous environmental regulations, including OekoTex 100 standard, GOTS V3.0, heavy-metal free, formaldehyde-free and alkyl phenol ethoxylates (APE)-free.

The d-t-g portfolio includes the printers Kornit Avalanche, Kornit Avalanche 1000, Kornit Avalanche Hexa, Kornit Avalanche DC Pro, Kornit Storm II und Kornit Breeze.

Kornit's classic model is the **Avalanche**, which is hailed by the manufacturer as the ultimate T-shirt printing machine. Featuring dual-pallets, 1.5 liter bulk ink system, automatic maintenance and pretreatment systems, the Kornit Avalanche is built for 24/7 operation. It offers fast print speed on both light and dark garments and has an throughput of up to 200 light A4 garments per hour. The Avalanche has 12 Spectra Piezo electric print heads, 5 colors and 256 nozzles per head and includes the NeoPigment™ process with integrated automated pretreatment. Printing Substrates are Cotton, Polyester, Cotton-polyester blends, Lycra, Viscose, Linen, Leather, Denim, Silk, Wool and more. In addition kornit offers a wide selection of pallets customized for different size garments .



Kornit Storm II

Kornit says that the dual-pallet printing system **Storm II** is the best-selling industrial direct-to-garment printing system on the market. It is based on robust, proven technology, features a double pallet system and provides one of the most efficient and cost-effective ways to print on garments up to 150 pieces / hour. The Storm II is available with an optional humidifying system to ensure performance even in demanding environments.

„low-Segment“

The “low” segment is composed of machines with a maximum output of 49 m²/h. One of the market-leading manufacturers in this field is Epson.

Epson currently offers the SC-F-6xxx and SC-F-7xxx product ranges for large-format sublimation printing of textiles across widths of up to 162.6 cm (64”). The SC-F-7xxx range includes the SC-F-7000, the SC-F-7100 and the SC-F-7200 announced in August.

Epson names the SC-F-7100 dye sub printer for roll-to-roll textiles an ideal printer for fast, economical short- to-medium volume dye sub printing, at speeds up to 58m²/hour (typically 30m²/hour in two-pass production mode) and widths up to 64-inches. With its new post-platen heater and an optional Print Drying System, prints dry faster. The SC-F-7100 is engineered by Epson with an enhanced auto take-up reel and improved tensioning.

It uses Epson's PrecisionCore™ TFP print heads as printing method and the aqueous Epson UltraChrome DS ink for ink technology with the four colours magenta, yellow, cyan and black. The 720 nozzles per inch of the TFP print heads deliver a quality 720x1440dpi resolution and the low-vibration printhead design creates highly accurate dots and places them precisely. The minimum droplet size is 5.3 pl, with variable-sized droplet technology.

The printer is equipped with an integral 1.5-litre per color bulk ink system which is easy to refill with the one litre ink pouches and allows minimal operator intervention. Epson says that this roll-fed CMYK printer works with all major transfer papers for a wide range of substrates with polyester coating: from sports goods to clothing, soft signage, banners and flags. The new SC-F-7200 appears largely similar to the SC-F-7100 in terms of technical specifications. However, it achieves an output of 58 m²/h in the case of single-pass processes.



Epson SC-F-7200

In May, Epson also announced a further dye-sublimation printer for printing widths of up to 1,625 mm (64"): the SureColor SC-F9200, which is scheduled to come onto the market in October. This printer features two PrecisionCore TFP printheads, which work in tandem, as well as dual ink sets. At a print resolution of up to 720 x 1,440 dpi, it achieves speeds of up to 97 m²/h in draft mode and 27 m²/h in quality mode. A high-power drying system allows rapid further processing of prints. Epson offers an UltraChrome DS ink set with a new high-density black ink, HDK Black, for use with this printer. HDK Black lowers ink consumption by reducing the amount of ink which needs to be applied to produce a dense black.

Mimaki also offers a range of digital printers in this segment. The **Mimaki TS34-1800A** is designed specifically for the sublimation transfer market. Sublimation transfer printing is widely utilised for sportswear applications due to the elasticity and quick-drying capability of polyester material. It delivers print speeds of up to 32 m²/h at 540 x 720dpi in a 4-colour mode and of 17.7 m²/h in a 6-colour mode.

The Uninterrupted Ink Supply System (UISS) as standard allows continuous unattended operation and two litre aluminium packs and automatic drying fans can be fitted as an option.

The **TS300P-1800** is a dye sublimation textile printer which has been developed specifically for the textile print industry. It offers a maximum speed of 115m²/h with a resolution of 360 x 360dpi, but the speed goes down to 18 sqm/h in a high quality mode of 720x1080dpi. The TS300P-1800 delivers a new Sb410 high performance, affordable sublimation transfer ink, the Mimaki MBIS3 Bulk Ink System for long-run continuous printing, the latest Mimaki MAPS4 Advanced Pass System and a Nozzle Check Unit (NCU) which ensures reliable continuous print operation.



Mimaki TS300P-1800

Featuring an automated, belt-fed conveyance system, the **Mimaki TX500-1800B** is able to print direct to a broad range of natural and man-made fabrics. It also offers a high speed in the draft mode, but goes down to 45sqm/h in a high quality mode of 600x1200dpi. The TX500-1800B delivers multiple ink types to print to cotton, polyester, hemp (linen) and rayon and has the Mimaki Advanced Pass System (MAPS) & Correct Feeding Control (CFC) to reducing imperfections in the high production mode. Furthermore the Mimaki Degassing Module (MDM-20) enables the use of bottled inks and the Mist Removal Filter provides an enhanced print stability. The media roll handling is up to 400 mm diameter and a maximum weight of 60 kg.

„high-segment“

The “high” segment, characterised by outputs of 50 – 649 m²/h, represents the backbone of the digital textile printing industry, as it is on machines of this type that by far the most textiles are printed. This very broad category includes machines from numerous manufacturers; however, they differ considerably in terms of design, features, speed and print resolution.

d.gen from Korea offers a wide range of digital textile printers in the “high-segment”. The company started with the Direct Print & Fixation Printer “Teleios” in 2003. At ITMA 2011 in Barcelona they presented their first 100% made at d.gen 3,3 meters textile printer Teleios Grande.

And at Fespa Munich d.gen launched a new generation of printers with Ricoh Gen5 printheads. The current version of the Teleios series are the Teleios Grande G5 S for soft signage, the Teleios Grande G5 model P for home textiles and the Teleios Black.

Both **Teleios G5** models offer an extra-size of 3,3 meters and and come with the latest Ricoh GEN5 industrial inkjet printheads with 1.280 nozzles per color and a maximum resolution of 2400dpi. The **Teleios G5 S** uses harmless waterbased dispersed dye inks for direct-to-textile. It works with 4 colors, a droplet size of 7 picoliters and true greyscale, that results in printing speeds up to **185 sqm/hr by 1200 dpi**. Thanks to its expanded color gamut and the eye-catching colors guaranteed by d.gen inks, reds becomes richer than blood and the excellent penetration provides great front and rear looking.

The **Teleios G5 P** uses pigment inks for direct-to-textile and 8 colors. The printing speed is **90 sqm/hr by 1200 dpi** and 185 sqm/hr by 600dpi. An option for buyers is the BIS-5000 ink feeding system. This easy-to-use 5kg per color large capacity ink feeding system is an open ink system, which allows a stable and continuous ink feeding, even able to refill ink while printing. The **Teleios Black** has a smaller width of 1800mm. It also uses waterbased dispersed dye inks and comes with a maximum resolution of 1,440dpi and a speed of 32sqm / h by 4passes.



d.gen Teleios Black

The **durst Kappa 180 V2** is a perfect production machine for industrial digital printing in the apparel industry, but is also used for furniture and fabric manufacture. The Kappa 180, with a maximum printing width of 195 cm, produces in standard mode with a print quality of 800 x 600 dpi and a production speed of 580 sqm/hour. The system achieves a resolution of up to 1000 x 600 dpi with a printing speed of up to 275sqm/hour. For Kappa 180 V2, the Durst Quadro printhead technology has been advanced to meet the different requirements of the textile materials with “QuadroZ V2”. The QuadroZ V2 printhead technology enables printing on textile materials using water-based dispersion, acid and GOTS-certified reactive inks. The 32 QuadroZ printheads have 6144 nozzles per color and droplet sizes of 7-21 picoliters.

With the **Rhotex 180 TR**, **Durst** has expanded its textile direct printing portfolio with dye-sublimation technology. Printing on sublimation paper and the transfer process using a calender minimizes production expenditure and enables those not in the industry to enter the field of textile production. The printing system is especially suitable for polyester and polyester blends used in clothing, household textiles and soft signage, for example.

The Rhotex 180 TR offers industrial productivity at a production speed of 200 sqm per hour and a maximum printing width of 1850 mm. Proprietary water-based dye-sublimation inks based on Durst Water Technology are available for the Rhotex 180 TR. These odorless, skin-friendly inks are free of volatile organic compounds (VOCs).

Since July 2015 Durst offers an optional “**Direct-printing kit**” for the Rhotex 180 TR. Direct printing is relevant not only for flag materials, but also for standard materials where the intermediate step with paper can be dispensed with.

With this expansion, the Rhotex 180 TR has been promoted to a “**Multi-function printing system**” for coated and uncoated materials in applications ranging from sports clothing to interior textiles to soft signage.



Durst Rhotex 180 TR

Efi Reggiani's flagship is the **ReNOIR** digital printing machine. The company claimed it as the link between innovation and tradition. The ReNOIR is suitable for a wide range of applications like fashion, garment, home textiles, Polyamide carpets, flags & banners and prints even on leather and technical textiles.

The printer is available in three printing widths: 1800, 2400 and 3400 mm and comes with 8 process colors, a resolution up to 2400 x 2400 dpi and variable drop sizes in 4 levels (4, 7, 12 and 18 pl). The production speed depends on the printing mode and is up to 400 sqm/h and around 250 sqm/h in average of all modes.

The ReNOIR has an open ink system and 10 l tanks for the water based inks (reactive, acid, disperse). ReNOIR is able to process any kind of substrate. Thanks to a kevlar blanket and an embedded dryer, ReNOIR ensures the highest standards of productivity, reliability and quality. ReNOIR is a very adaptable and flexible machine, able to conform with clients needs.

Thanks to water based inks and low consumption it is a fully eco-friendly printing process. Efi Reggiani offers also a **ReNOIR compact** with a lower resolution of 1200x2400 dpi, a printing width of 1850mm and a printing speed up to 200sqm/h in a high speed mode and 60 sqm in a high quality mode. This printer is a true single-pass printer. Last but not least the Efi Reggiani **ReNOIR compact paper** is a dye sublimation solution. It comes with 1800 mm printing width and speeds up to 205 sqm/h in the high quality mode of 1200x1200 dpi.



Efi Reggiani ReNOIR compact paper

Konica Minolta's flagship model of inkjet textile printer is the **Nassenger PRO1000**. Konica Minolta claims it the fastest printer because the newly-designed printhead carriage realizes a maximum print speed of 1000sqm/hour (540 x 360dpi). At a higher resolution in a production mode of 900x720dpi the printer reaches a speed of 420 sqm/h. The independently-driven channel printhead has 1024 nozzles, each with a nozzle density of 360 npi. The Nassenger PRO1000 offers 9 colors to realize the rich color expressivity required of textile printers. The increased number of colors enhances color gamut, color reproducibility and graininess. The ink lineup comprises reactive-dye, disperse-dye and acid-dye types. The system provides a a large-capacity 40 L ink tank for each colour.

Kornit Digital's Allegro brings single-step printing to the fashion, home textile and e-commerce markets. Kornit names the Allegro a roll-to-roll industrial textile printing system. However, following our definition it is a system for the "high-segment", because it has an output of about 300 m²/h in the high speed mode and about **180 m²/hr** in the production mode - probably by 1200 dpi (not specified). The Allegro is a stand-alone, one step, no-pretreatment, digital printing solution and supports multiple fabric types for fashion, active and home-decor applications. As the other systems the Allegro is based on Kornit's water-based NeoPigment™ printing technology that completely eliminates pre- and post-treatment processes for both natural and synthetic fabrics. The print heads Spectra Polaris have 64 heads and use 7 colors (cyan, magenta, yellow, black, red, green, gray) and an inline ink fixation agent.

The printing area is up to 180 cm / 70.8 in.

The Allegro offers the possibility to digitally print on multiple fabric types like woven and knitted and non-wovens based on natural fibers cotton, linen, viscose and some more with just one printer.

The **Mimaki** TX500-1800DS Series is a direct dye sub printer which touches this segment with an output of 60 sqm by 600 x 900dpi and 45sqm by 600x1200dpi. It comes with a newly developed 6 print head technology, in staggered formation, featuring 1280 nozzles per printhead that delivers a maximum speed of 150 m²/h in 4 colour mode. Variable drop sizes from 7 picolitres up to 35 picolitres can be achieved. It delivers a new fast drying dye sublimation ink (Sb300) and is equipped with the Mimaki Advanced Pass System (MAPS) reducing imperfections in high production mode and the Mimaki Degassing Module (MDM-20) enabling use of bottled inks. Furthermore it has a mist removal filter for enhanced print stability and an auto media feeder for continuous printing.

MS from Italy which has been sold in 2014 to Dover Corporation, a diversified \$8.7 billion global manufacturer, offers a range of four inkjet printers in this segment: **MS JP5evo**, **MS JP6**, **MS JP7** and **MS JPK EVO**. The MS JPK EVO offers a printing width up to 320 cm, the three other systems up to 180 cm. All systems have a 600 dpi x 600 dpi resolution with a drop size from 4pl to 72pl and support 16 graylevels.

They are equipped with an open ink system and an open software system and come with both embedded remote diagnostic and embedded web server for cost report. The difference of the single types are in the number of printing heads and in the speed. The **MS JP5evo** has high resolution speed of 50 lin. met./h and up to 4 printing heads with 8 colors. The **MS JP6** has up to 8 printing heads and offers a high resolution speed of 90 lin. met./h. Even faster is the **MS JP7** with a high resolution speed of 180 lin. met./h. This type has the large number of up to 164 printing heads.

The **MS JPK EVO** is nearly on an industrial level with a maximum speed 640 lin. met./h and high resolution speed of 350 lin. met./h. With the printing width of 180cm the MS JPK EVO has an output of 630sqm/h.

The **Robustelli MONNA LISA®** is available in three different printing widths: 180, 220 and 320 cm. The 180 and 220 versions can be equipped with 16, 32 or 48 Epson T2 printing heads. The 320 cm version is available with 16 or 32 Epson T2 printing heads. Monna Lisa® printers can be loaded with 4 colours (double four-colour printing), or with the basic 8 colours of ink by GENESTA®, with a choice of the following types: acid, reactive, disperse or pigments.

The MONNA LISA® 180 T48 has a max. printing resolution of 720x720dpi and a printing speed of 274 sqm/h in this mode. The cartridge capacity is 3l.

Industrial segment

In order to qualify for inclusion in this category, digital inkjet printers have to comply with high standards, including a minimum output of 650 m²/h. As a result, the number of printers satisfying these requirements is limited, and there are only a few systems available on the market. However, numerous manufacturers have announced their intention to unveil new systems in this category at the ITMA 2015, and the fair is likely to signal the category's breakthrough.

The **Durst Kappa 320**, which was developed specifically for home textile needs, features a maximum printing width of 330 cm. This enables it to digitally print interior decor and decorative materials such as blankets, bed linen, table linen, curtains and drapes across their full width. In standard mode, the Kappa 320 produces with a print quality of 800 x 600 dpi and a production speed of 890 sqm/h. The system achieves a resolution of up to 1000 x 1200 dpi and a printing speed of up to 370 sqm/hour in the high-quality mode.

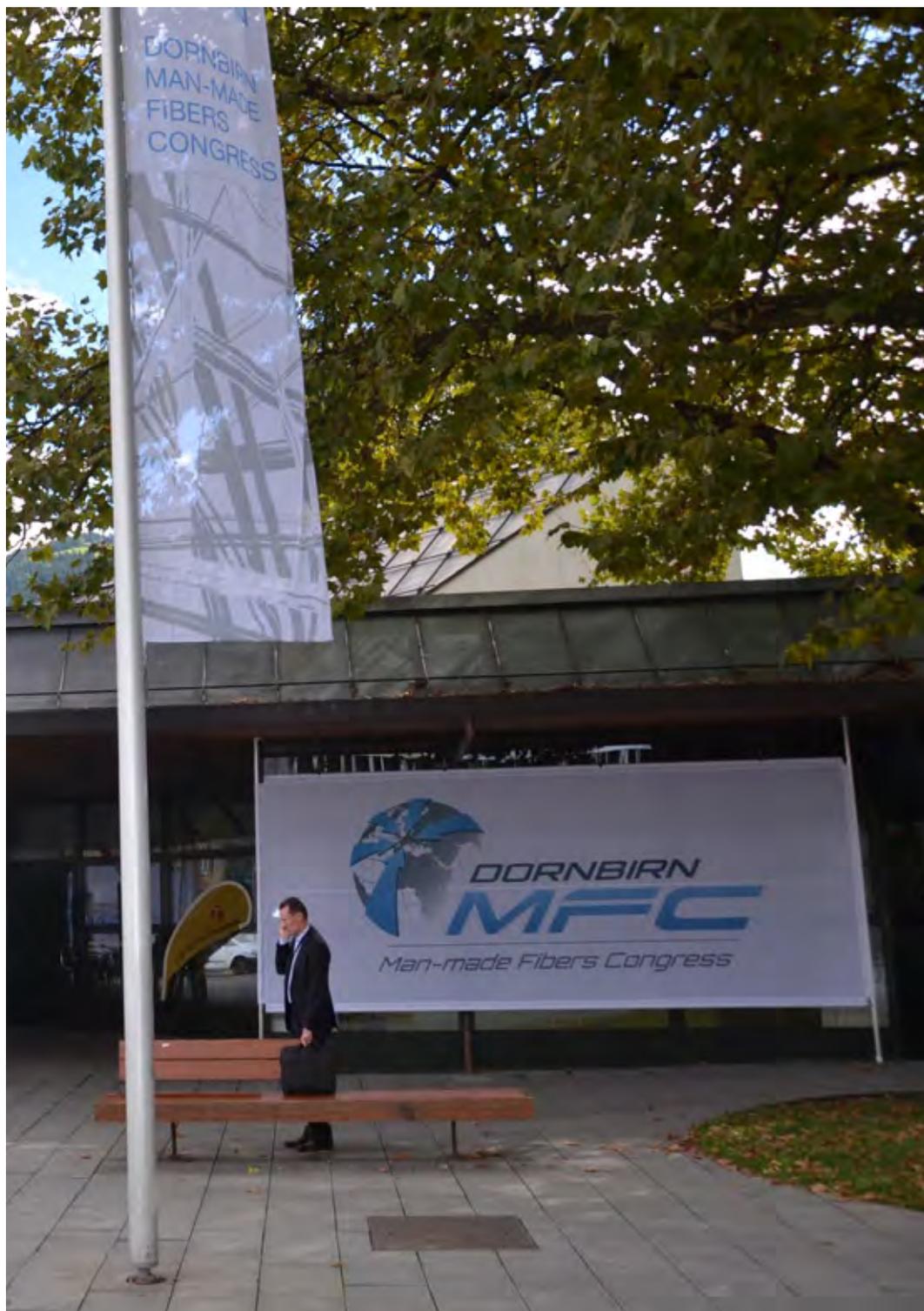
Kappa 320 is equipped with the latest QuadroZ V2 printhead technology, where the colors are arranged symmetrically on the 8-channel print heads to ensure total color conformity across the entire width of printing. The QuadroZ V2 printhead technology enables printing on textile materials using water-based dispersion, acid and GOTS-certified reactive inks.

The 32 QuadroZ printheads have 6144 nozzles per color and droplet sizes of 7-21 picoliters.

Kappa 320 is equipped with an adapted Corino fabric feed-in system, an unwinder for large rolls and a powerful thermally insulated dryer unit with 1-3 passages. Other components are optionally available and can be configured individually.

The **MS Lario** offers an amazing maximum speed of 75 linear meters a minute what means 4500 linear meters in one hour. With a printing width of 320 cm with this digital inkjet printer an outstanding fabric quantity of 14400 sqm can be produced in only one hour. MS has announced at the end of 2014 that they have signed a contract with Shandong Ruyi Group for the supply of the first LARIO.

So much for the latest technological features of selected inkjet printers in the run-up to the fair; we trust this information will enable you to make a more accurate appraisal of the innovations due to be unveiled at the ITMA. Virtually all manufacturers have announced new developments and we expect to see significant technological advances. Preliminary information about the innovations to be launched at the fair can be found in our ITMA preview.



54. DORNBIRN-MFC communicated the future of man-made fibers

For the 54th time, the Man-Made Fibers Congress took place in Dornbirn from 16-18 September 2015. We attended the congress, and the lectures gave us an insight into the numerous innovations with respect to new fibres, optimising fibre production, sustainability and other fields of research within the world of fibres. We will be presenting them to you in more detail in subsequent issues of the TexData Magazine. This article is merely intended to provide you with a brief preview.

In keeping with tradition, the congress was opened by the Managing Director, Mr. **Friedrich Weninger**, together with Mr. **Robert van de Kerkhof**, President of the AUSTRIAN MFI; a welcoming address was delivered by Mr. **Karlheinz Rüdissler** from the Regional Government of Vorarlberg. The opening ceremony was then followed by a number of plenary lectures.

Here Mr. Meiercord, President of CIRFS, gave a speech about “The European chemical fibre industry - global overcapacities and other challenges“. The paper did review the global situation, the strengths of European industry and the challenge of overcapacities. In detail Mr. Meiercord presented a world fibre production of 92.7 million tonnes in 2014 with a share of 71 percent for the man-made-fibers. These revealed that total fibre production had gone up by 20 per cent since 2010 (76.9 million tons), with man-made fibres having increased their share by 4 per cent. China is by far the largest producer, with a 66% share and a focus on polyester, which accounts for more than 70 per cent of total production.

Europe follows by 7 percent, but has a more balanced mix with 30 percent Polyester, 23 percent Polyolefins, 15 percent Acrylic, 16 percent Cellulosics and 12 percent Polyamide. Third in the total production figures India (7%), followed by the USA (4%), Taiwan (3%) and Indonesia (3%). Since 2014, polyester has been able to increase its share of total global production from 62% to 74%.

Mr. Meiercord sees the most significant challenges for the European man-made fibres industry as being over-capacity in China and Asia, which could increase even more in the light of further planned investments and subsidies.

The lectures were followed by the presentation of the PAUL SCHLACK / WILHELM ALBRECHT AWARD 2015. It has been awarded to Dr. Wilhelm Steinmann, Institut für Textiltechnik der RWTH Aachen (G) for his paper “Electrically conductive fibers from nanocomposites“, while the HONORARY AWARD has been conveyed upon Dr. Klaus Opwis, Deutsches Textilforschungszentrum Nord-West Krefeld (G) for his work on “Innovative textiles for the recovery of noble metals“.

More than 100 high-calibre presentations by international experts from industry and academic research in three panel sessions followed. The session topics were ‘Innovations in fiber and filaments – in particular Bio-Polymeres’, ‘Advanced Fiber- and Processing Technology’ and ‘Nonwovens/Filtration’. Furthermore sustainability – in its ecological, social and economic aspects – was an overall topic of this year’s meeting. Very exciting innovations has been reported in the field of “Fiber and Filament Innovations – (Bio-)Polymers“.

For example **Kazue Ueda** from Unitika spoke about high heat resistant bio-polyamide and its features and applications in automobiles. He introduced Xecot to the audience which has a high heat resistance with 56% biomass.

Andreas Flachenecker from PHP Fibers introduced the company's research results in the field of bio-based polyamide polymers for high tenacity yarn production.

His conclusion was that technical yarns made from bio-based PA 4.10 polymer should be considered as sustainable and equivalent alternative for yarns made from fossil based PA 6.6 polymer.

Kristel Beckers from CENTEXBEL spoke about 'Self Reinforced Polymer Composite' (SRPC) as an alternative for GMT materials. The introduced bioSRPC is developed out of PLA and has many advantages like lightweight, fully thermoplastic, enhanced impact resistance, thermoformability and recyclability.

In the lecture 'Advanced Fiber- and Processing Technology' for example **Martin Hengstermann** from ITM (TU Dresden) spoke about new yarn constructions from recycled carbon staple fibers and thermoplastic fibers for composite. This was a very interesting topic for the industry because of rising demand for carbon fiber and their applications, the high amount of waste in the production and preforming and of course the high purchase price of carbon fiber. At ITM the scientists produce a hybrid yarn from carbon fiber waste and pa6 staple fiber with a very good mixing of the fiber. A series of tests have shown that the resulting rCF yarns have good characteristics. However, before industrial production there must be further research to optimize the process parameter for yarns and composites.

And in the 'Nonwovens' lecture for example **Dr. Martin Häubl** from Lenzing introduced a new Tencel fiber as a skin-friendly solution for adult incontinence.

Lenzing has made a trial in Germany with the task to 53 people to test a PP 100% topsheet vs. a TENCEL® Biosoft* topsheet for 4 weeks. The result was that at the end more than 50 percent of the testers voted for the new Tencel fiber as the best product.

Mr. Ingo Windschiegl from iTV Denkendorf spoke about bonding methods of meltblow nonwovens with a special view on applications for filtration, substitute for membranes, as a barrier for protective gear or simply as additional layer on knitted or woven fabrics. Here the risen demand for better barrier effect requires finer nonwovens. Therefore the need of meltblow nonwovens becomes more important, especially for nonwovens with fibers in diameter $< 1 \mu\text{m}$ and subsequently much smaller pores.

Most of the times the mechanical strength of meltblow nonwovens is very low and decrease the finer the fibers will be. Due to that in many cases the finest fiber nonwovens are manufactured as so called SM(M)S-nonwoven composite (spunbond-meltblow-spunbond). And he concluded that for further improvement of properties a combination with textile fabrics are achievable. A crucial advantage of such composite material is, that there is no need for binders or adhesives and the whole effective area will be preserved.

Side by side with outstanding plenary and specialist papers, the meeting for the first time also featured a Panel Discussion with representatives of internationally renowned brands.

Another big topic has been the promotion of the Dornbirn-MFC “Innovation Community“. The declared objective is to massively enhance interactivity among participants and lecturers and to make the best possible use of the “Think Tank“ of researchers and technologists. The results achieved by a questionnaire on ”Innovation in the Enterprise“, and in particular the high response rate, clearly demonstrate that the recipients are willing to participate in and give shape to the “Innovative Community“. In this context, there will be some changes in the form and use of modern communication instruments.

Overall, the congress had a very positive feel about it. This may be due to the fact that man-made fibres in particular face a bright future, as the ever-increasing demand for fibres is likely to generate good growth in the coming years. We were pleased to note just how many research institutes are addressing the issue of new and above all sustainable fibres, and it will be interesting to see how these develop in terms of industrial use. Some of the speakers will be keeping us up to date via expert articles to be published in TexData Magazine.



Country Focus:

by Oliver Schmidt

Ethiopia

In this edition of our ‘country focus’ series, we will be taking a look at a country poised to become a textile nation: Ethiopia. In recent years, Ethiopia has issued numerous reports that leading brands and retailers from the clothing industry are using the country for their textile production or intend to make greater use of it in future. In a country where the textile industry is still in its infancy, present-day sustainability requirements can be taken into consideration right from the start, which means Ethiopia has a good chance of establishing itself in this field. Reason enough to take a closer look at their development with a focus on textiles and clothing.

Ethiopia, is a country located in the Horn of Africa. It is bordered by Eritrea to the north and northeast, Djibouti and Somalia to the east, Sudan and South Sudan to the west, and Kenya to the south. With over 100 million inhabitants, Ethiopia is the most populous landlocked country in the world, as well as the second-most populous nation on the African continent after Nigeria. The population growth rate was 2.5% in 2014. It occupies a total area of 1,100,000 square kilometres (420,000 sq mi), and its capital and largest city is Addis Ababa. Founded in 1886, Addis Ababa lays in the center and is the largest city in Ethiopia, with a population of 3,384,569 according to the 2007 population census with annual growth rate of 3.8%.

The predominant climate type is tropical monsoon, with wide topographic-induced variation. The Ethiopian Highlands cover most of the country and have a climate which is generally considerably cooler than other regions at similar proximity to the Equator. Most of the country's major cities are located at elevations of around 2,000–2,500 m (6,562–8,202 ft) above sea level, including historic capitals such as Gondar and Axum.

Ethiopia is a federal parliamentary republic, whereby the Prime Minister is the head of government. Executive power is exercised by the government. Federal legislative power is vested in both the government and the two chambers of parliament. On the basis of Article 78 of the 1994 Ethiopian Constitution, the Judiciary is completely independent of the executive and the legislature. The current government of Ethiopia was installed in August 1995. The first President was Negasso Gidada. The EPRDF-led government of Prime Minister Meles Zenawi promoted a policy of ethnic federalism, devolving significant powers to regional, ethnically based authorities.

Meles Zenawi Asres was the Prime Minister of Ethiopia from 1995 until his death in 2012. Since 15th September 2012 Hailemariam Desalegn Bosche is the Prime Minister of the country. The President of Ethiopia is Mulatu Teshome Wirtu since 7 October 2013. Ethiopia today has nine semi-autonomous administrative regions that have the power to raise and spend their own revenues.

Ethiopia is one of the founding members of the UN, the Group of 24 (G-24), the Non-Aligned Movement, G-77 and the Organisation of African Unity, with Addis Ababa serving as the headquarters of the African Union, the Pan African Chamber of Commerce and Industry, the UNECA, African Aviation Training HQ, the African Standby Force and much of global NGOs focused on Africa.

Now let's take a look at the economy. In the 2014 GDP rankings for all member states of the World Bank, Ethiopia is in 81st place with 47,525 million USD and contributing 0.06 percent of global economic output, just ahead of Tunisia and just behind Slovenia. The country's per capita GDP in 2014 was only 1,642 USD according to IMF figures.

Here, Ethiopia lies in 173rd place of 187 countries in IMF statistics, behind Burkina Faso and ahead of Gambia. With one of the lowest per-capita incomes, Ethiopia is among the least developed of the developing countries; this is also true of the textile nations Bangladesh, Cambodia and Myanmar.

GDP Annual Growth Rate in Ethiopia averaged 10.8 percent from 2004 until 2014, reaching an all time high of 12.6 percent in 2010 and a record low of 8.6 percent in 2012. According to the World Bank in the last three years the growth rate was constant on a high level (2012: 8.6%; 2013: 10.5%; 2014:9.9%). The economy has experienced strong compared to the regional average of 4.8%.

The World Bank says that the main challenge for Ethiopia is to continue and accelerate the progress made in recent years toward the MDGs and to address the causes of poverty among its population. The government is already devoting a very high share of its budget to pro-poor programs and investments. Large scale donor support will continue to provide a vital contribution in the near-term to finance the levels of spending needed to meet these challenges. However, even if donor support is increased, using aid effectively will require Ethiopia to improve governance, empower local authorities, and become more accountable to its citizens.

According to World Trade Organization data, Ethiopia was on the 124th place on the list of exporting country in the world in 2013 with a share in world total exports of 0.01 percent.

The WTO reports that in 2013 Ethiopia exported goods worth a total of 2.7 billion USD (-7%), compared with imports worth 12.2 billion USD (+2%), thus generating a trade deficit of 9,500 million USD. Ethiopia's most important trading partner is the EU(28) which accounts for 28.4% of exports and 14.0% of imports, followed by China with 11.1% and 28.6% respectively. Other important export markets for Ethiopian products are Somalia (9.0%), Kingdom of Saudi Arabia (6.6 %) and Switzerland (6.1 %). Other major suppliers of imports to Ethiopia are Kingdom of Saudi Arabia (14.1%), India (8.3 %) and Kuwait (6.2 %).

Overall, exports accounted for 11.7% of GDP in 2014. Foreign direct investment came to almost 1 billion US\$ in 2013.

The high rates of inflation previously seen (2011:33.2%, 2012:22.8%) were cut to 8.1% in 2013 and 7.4% in 2014.

The most important sector of the economy is agriculture. It contributes around 42.3% (2014; 45% in 2013) of the gross domestic product and 84.5% of exports (2014). Moreover, this sector is of major importance for the labour market, as four-fifths of all Ethiopians are employed in agriculture. The most important agricultural product is coffee, which generates 65–75% of foreign exchange revenue. Energy and mining account for a further 0.6%. In the same period, the industrial sector contributed 15.4% to GDP, indicating that it has grown considerably since 2012 (10.3%). A major contribution is also made by the service sector, which is responsible for 42.2% (2014) of value creation. Around a quarter of the population have an income of less than one US\$ a day; four-fifths have less than two US\$ a day at their disposal. A large proportion of the population (44–50%) is living below the poverty threshold.

And this brings us to the textile industry. According to the WTO statistics from 2014, Ethiopia is neither a textile country nor a significant producer of clothing. Textile exports were valued at 27 million US\$ in 2012, 47 million US\$ in 2013 and 39 million US\$ in 2014. Compared with total global exports valued at 314,075 million US\$, these figures are minuscule. Much the same picture applies to clothing exports, although here at least a consistent upward trend can be seen. Clothing exports were worth 39 million US\$ in 2012, 43 million US\$ (+10%) in 2013 and 56 million US\$ (+30%) in 2014.

By way of further comparison: In 2014, Bangladesh exported clothing worth 24,584 million US\$, and Vietnam clothing worth 19,544 million US\$. However, if we look further back in time, we see that Bangladesh, for example, had exported clothing to the value of 5,067 million US\$ in 2000 and a mere 643 million US\$ in 1990. In other words, Bangladesh was able to increase exports by a multiple of almost eight in the first decade and a multiple of almost fifteen in the fifteen-year period thereafter.

Now let's take a look at the present situation of the textile and clothing industry in Ethiopia. This appears to be quite straightforward. Since 2003, the industry has had its own association, the Ethiopian Textile and Garment Manufacturers' Association (ETGAMA). This is a national association of textile and garment industry, to represent the interests of member companies with the objectives of capacity building, Marketing and Policy Advocacy. ETGAMA lists five spinning mills, around 40 integrated factories and about 60 clothing manufacturers on its website. In addition, there are around 30 suppliers.

But what evidence is there to suggest that the textile and clothing industry can develop rapidly in a country like Ethiopia and how is this to be achieved? What makes this an interesting country for manufacturing? In order to answer this question, we need to take a look at a variety of factors. Firstly, the government of Ethiopia sees the textile industry as a potential high-growth sector for the country and, in an attempt to corroborate this view and raise international awareness, has published a target growth figure.

The aim is to export clothing to the value of around 1 billion US\$ in 2016. Judging from the current figures cited above, this is a utopian goal, but a goal nonetheless. The government is receiving substantial backing from ETGAMA in realising these plans. Both see the future industrialisation of the country as hinging on exports and human labour.

A second factor to consider is that prevailing conditions in the country are good. In addition to the extremely low wages for textile workers, which according to n-tv start at 21 US\$ per month, an analysis conducted by Germany Trade & Invest (GTAI) in 2014 indicated that the country had an endless supply of labour and that Ethiopian workers were seen in the African world as being hard-working and disciplined.

Thirdly, Ethiopia has an abundance of agricultural land suitable for cultivating cotton – a prerequisite offering immense potential. ETGAMA states on its website: „The country has 3 million hectares of land suitable for cotton production.” If we take a look here at the list of cotton-producing countries published by the Bremen Cotton Exchange in its annual report, it soon becomes evident that utilisation of a mere 10% of this land would almost suffice to put Ethiopia among the world's top 10 countries in terms of cotton-growing acreage. Unfortunately, the current cultivation acreage is not specified on the website, but the amount of cotton produced in 2013 is cited as being 17,000 tonnes. The highest figure recorded in recent years was 21,000 tonnes in 2011. By way of comparison: In the 2011 season, Mali produced around 100,000 tonnes of cotton over an area of approximately 300,000 hectares.

The reason for the figure being so low is the poor yield of 360 kg/hectare. By comparison, Australia and Israel produce around 2 tonnes/hectare. However, these countries are relying to an increasing extent on genetically modified cotton and, according to GTAI, Ethiopia intends to follow their example in this respect. In its presentation, on the other hand, ETGAMA claims to see great opportunities for organic cotton. Only time will tell whether the plans for a significant increase in cultivation acreage are to be taken seriously and to what extent they can be implemented. In the ETGAMA presentation, at any rate, the long-term vision for the country is outlined in such a succinct way that the plan begins to take on credibility: Ethiopia wants to become the China of Africa!

However favourable these factors may be, they would not suffice without a fourth one, namely the search for new manufacturing countries on the part of the international textile and clothing industry. The reasons for this search are simple. Wages in Asia are on the rise, especially in China, but even Bangladesh has since introduced a minimum wage. This primarily affects the low-price segment, as here it is usually price alone that matters, according to GTAI, which refers to the international textile buyers as nomads constantly moving on to other destinations where they can purchase at rock-bottom prices. Although there may be some truth in this claim, it is not necessarily as negative as it sounds. After all, it is only fair to question where certain Asian countries would be today in terms of their economy and the struggle against poverty had the textile industry not come knocking at their door to take advantage of the low wages. The answer: possibly or even probably on a par with many African countries.

But that's a separate issue.

Ethiopia is already on the radar of numerous major brands and retailers. GTAI explicitly mentions the British supermarket chain Tesco and the Swedish retailer Hennes & Mauritz (H&M), which are reported to have opened offices in Ethiopia in 2013. N-tv reports that in 2015 U.S.-based VF Corporation, which owns brands such as Lee, Wrangler and Timberland, has been receiving its first deliveries of garments made in Ethiopia. And other U.S. companies, such as Wal-Mart Stores, J.C. Penney and Levi Strauss & Co., are reportedly also very interested in doing business with this region of Africa. Kik is already having garments sewn in Ethiopia.

In the report headed “Sourcing in a volatile world – The East Africa opportunity”, which we recommend reading for more in-depth information on this topic, McKinsey states: „Global buyers’ preferences also indicate real interest in those specific countries, Kenya and Ethiopia. The largest US brands and retailers, as well as selected European retailers, including some of the influential fast-fashion players, have begun sourcing in these locations. Over the next five years, many respondents indicated that these two markets will occupy more share in their sourcing portfolios”.

Hence, the prerequisites for Ethiopia becoming a textile nation are good. Both the government and the textile industry are undertaking tentative measures aimed at further implementing the plan.

The association is presenting a clear strategy, based primarily on developing the textile industry by means of private businesses granted a high degree of freedom, concentrating on exports and establishing a balance between businesses and the government. The government is also well positioned and has already adopted an extensive incentive programme to encourage both investment and imports.

The comprehensive package includes various investment schemes, customs duty concessions and tax relief through to an income tax waiver for foreign workers, as well as availability of newly-established industry zones for 1 US\$/m² and cheap land (0 to 3 cents/m²/per year for 60-80 years along with very cheap water. Moreover, energy supply is very stable by African standards; it comes from “green” hydro-electric power plants and, costing 5 cents/Kwh, is within a reasonable price range.

Parts of the textile industry at least are responding to these plans with plans of their own. N-tv reports, for instance, that Vanity Fair has joined forces with its biggest competitor, PVH, in order to convince suppliers to go along with their plans. In April 2014, they invited their 20 best suppliers from countries such as China, India and Sri Lanka to take part in a 10-day trip.

Their aim was to tempt them into opening their own factories in Africa – based on the assurance that the American brands would place orders with them there in return.

The textile machinery industry has also long since recognised the opportunities to be had in Ethiopia. A year ago, in October 2014, the textile machinery division of the German Mechanical Engineering Association (VDMA) sent a delegation to Ethiopia and positioned itself as a future supplier of high-quality machinery. The duty-free import of machinery is also one of the incentives adopted by the government for the purpose of achieving its goals.

Finally, we’d like to say a few words about sustainability. On the one hand, in the light of “green” issues, it seems more logical to develop the textile industry in accordance with the principles of sustainability right from the start. However, cheap and sustainable are seen as being somehow mutually exclusive, and the international textile industry at any rate seems to take the view that the issue of sustainability should be dealt with at a second stage.

Conclusion

For the first time in our ‘country focus’ series, we have taken a look at a country which still has no textile industry of any significance. It is also the first time that we have reported on an African country. In the words of the former UN Secretary-General Kofi Annan at the World Textile Summit 2011 in Barcelona, there is no industry more international than the textile industry, and it looks as if this internationalism could spread to Africa to a large extent.

The prerequisites are good, and Ethiopia should not allow itself to be placed under too much pressure, but take gradual steps forward and rely upon the textile industry, which has extensive experience in turning developing countries into seasoned textile nations.

All the industry needs is the right basic conditions and a good deal of willpower on the part of those involved – something that would already appear to exist. Let's hope Ethiopia succeeds in becoming the China of Africa in twenty or thirty years' time. Then we might even see an "ITMA Africa".

Topics of the next issue 1 /2016

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