

# textile.4U

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**TEXDATA**  
INTERNATIONAL

THE TEXDATA INTERNATIONAL MAGAZINE

## ITMA 2023 REVIEW

+++ REPORT ON 100 EXHIBITORS +++  
+++ 300 INNOVATIONS +++



„THERE IS NO TIME!“  
EU TEXTILE STRATEGY

**IS THE UPSWING COMING?  
LATEST INNOVATIONS COME TO CHINA.  
PREVIEW ITMA ASIA + CITME 2022**



**“MicroPunch” -**  
Intensive Needling Technology  
for Lightweights  
Large Energy Savings  
No Water Consumption





## FROM THE EDITOR

# DEAR READER,

after a long summer, ITMA 2023 is now a few months behind us, and it also took this time to filter and compile the many impressions as well as the technical innovations for you. We were on site at the trade fair for the entire time and inspected almost all the stands, visited over 300 exhibitors and conducted interviews with the 100 market leaders about their innovations and their market assessment, some of which we will make available to you in this issue. One conclusion in advance: As usual, the world's leading trade fair for textile machinery has succeeded in underpinning its leading role and demonstrating how current and future technologies can be used to master the numerous challenges of the coming years.

The ITMA thematically addressed above all the major megatrends such as automation, digitalization, sustainability and recycling. The exhibitors' innovations were found in these areas. Perhaps surprisingly, perhaps inevitably, the innovations at many exhibitors went in the direction of further optimizing existing solutions. It was often about details. It was about achieving goals via the effect of the sum of all parts. There were comparatively few completely new ideas for machines, production methods and processes. This may be based on the fact that improving sustainability has already become a guiding principle for the industry since ITMA 2011, and the topic has therefore been conceptually on the way for a long time.

In addition, leading manufacturers began to set the course for digitalization at ITMA Asia 2018 at the latest. Numerous developments and studies started in recent years have now been improved to industrial market maturity, and so ITMA 2023 perhaps offered less of a look into the future than its predecessors and rather shone with immediately usable solutions. At first glance, this may not sound so exciting for technology enthusiasts, but it is in the nature of things.

Improvements in data acquisition, processing and visualization are just as imperceptible en passant as improvements in energy efficiency, raw material use and utilization, and the minimization of auxiliary materials. Such optimizations require deep insight and are in high need of explanation. The limited clarity is particularly evident in the case of eliminated processes, because how do you demonstrate something that now no longer exists? So there it was, the mass of innovations, and you can find them in our big ITMA review.

Regarding the atmosphere at ITMA, I can say, as usual, it pushed me a lot. There was a huge energy at the show and in the end it solidified the impression in my mind: the industry, exhibitors and visitors, textile machinery manufacturers and textile workers, is very willing and ready to actively approach the shaping of the future and to provide, deploy and develop the needed solutions.

The progress made in recycling in particular, perhaps the most comprehensive and transformative new paradigm set by European Union policy, indicates that ambitious implementation by 2030 need not be unrealistic. At least not in terms of the technological side of the task. This should give courage and strength to continue on the path of sustainable change, because it is, as German Chancellor Angela Merkel liked to put it, without alternative.

This is also the view of the President of EURATEX, Alberto Paccanelli, who, together with Valentina Superti, Director of the European Commission and responsible for the textile sector, was at the fair to get an overview and at the same time to inform about the latest laws and concepts. We spoke to both of them and have summarized the most important things for you. I wish you good reading and look forward to any form of feedback.

Yours sincerely

**OLIVER SCHMIDT**

#Editor-in-chief



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**Ms. Valentina Superti**  
Director  
European Commission

**Mr. Alberto Paccanelli**  
President  
EURATEX



The EU textile strategy was adopted over a year ago and its immense importance for the future of the global textile industry has of course already had a significant impact on the technology of the exhibitors at ITMA 2023 in Milan. Here, we had the opportunity to interview the responsible Director of the EU Commission (Director for Ecosystems II: Tourism & Proximity [GROW.G] in the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs), Ms. Valentina Superti, and the President of the European Association for Textiles and Clothing EURATEX, Mr. Alberto Paccanelli, on the state of affairs and future developments. Both agreed in unison that there is a huge need for information on what textile companies will have to face in the coming years, what changes will have to be made in positioning, production, employee knowledge and in logistics as a whole, indeed in almost all departments, and above all what support the EU is already offering and will offer companies to master this transformation.

” Companies need to realize that, let’s say, between 2024 and 2030 there will be a big impact on the industry. And that is what they should know and prepare themselves. ”

The EU Director provided broad outlines and examples of the legislative process, what has already been achieved, the complexity of even what could be considered very simple issues, the next steps, the timetable and the planned assistance for companies. With regard to the process, she said that the aim is to make the laws in such a way that they are both target-oriented in terms of strategy and manageable for companies.

by Oliver Schmidt

## IMPLEMENTATION OF THE STRATEGY

She said: "How should the strategy be translated into actions? First of all, by having a discussion with all the possible stakeholders, but also member states, the other institutions, the regions, the authorities, the large bodies of skill, the technical groups, educational groups, the educational bodies, with all those actors, so the ecosystem logic. And we are having a conversation, first of all, in order to identify agreed areas of action. We have here, I think, eight themes that we have identified. But the point is that we have identified those eight themes in discussion with the stakeholders. This is supposed to be a bottom-up exercise as well. It's not us telling the story, it's more us receiving the story, hopefully the two stories go in the same direction. So, that's the objective."

## DECISIONS FROM PRACTICE FOR PRACTICE

She rounded off by naming one of the stakeholders and passed the baton to the EURATEX President." By the way, Euratex, these guys here, they are great stakeholders in this discussion. We worked very closely on the preparation of the document". Mr. Paccanelli took it up and spoke about the role of Euratex and its focus in the discussion: „As you may know, EURATEX represents 40 associations and 160,000 companies and is representing the whole industry all over Europe. So, we have a privilege to work closely with the Commission in shaping legislation, give position papers, discuss what is best for us. Of course the main

message from the industry is we accept that there is a transition to make in terms of sustainability and in terms of modernization.

We are not against that. The issue is to make sure that all the companies, including the small companies, are able to manage this transition, considering that we are a very globalized industry, where 70% of what we consume in Europe is imported from outside Europe. The main issue is to grant a level playing field competition. Competition has to be fair and has to be considered at worldwide level. You cannot impose to a small company in Italy for example very strict regulations and then you do nothing on imported product, maybe done in Bangladesh without respecting labor laws, without respecting pollution laws, chemical laws, etc. The major concern, and they know very well, is how we can create a level playing field competition."

## NEW LAWS AFFECT COUNTLESS AREAS

The complexity of the undertaking Ms. Valentina Superti first illustrated with a brief list of the enormous dimensions of the implementation of the EU textile strategy: "I think what we are trying to do is a very difficult, is to have those many pieces of legislation to be fair. It's also legislation which concerns the social rights of the country. It's also legislation which concerns the due diligence of the nation of the supply chain which makes the coherence across the education and intensity. Also because it's different departments, we have to work together to have coherence of rules, and rules which are clear".

And she used a simple example to illustrate the enormous depth of the task. „If you do not have a homogenous legislation on what is understanding as waste, textile waste in Europe, then the risk is that every country has a different understanding of what is a textile waste and then it is very difficult to start investing in a recycling hub to manage waste. So, these are things that have to be solved in this process", she explained.

## NEW PAPER AND LAWS ARE ON THE TABLE

Regarding the current status and the next steps, Ms. Superti said that a few days ago they published a paper which focuses on the path of transition for the textile ecosystem. There are currently 16 legal acts on the table that relate exclusively to sustainability. There will probably be even more in other areas such as world trade, the internal market, standards and labeling. Mr. Paccanelli added the following: "We need to make sure that we have a simple, smart legislation that we can easily implement, which is very difficult, we understand. We need to be helped because we need funds to make this transition, because we are a very diversified industry with a lot of small companies. And at the end, if we want sustainable products to be sold in Europe, we need the consumer to appreciate that there is a value. There are many challenges, it's not easy because transferring legislation into the industry will be a big task, but certainly this document is well written and has a lot of good points for the industry. Then we need to move forward in the support and in the smart legislation."

## TIME IS RUNNING OUT AND MUST BE USED

The Director and the President were very much in agreement regarding the time component. The laws are being implemented promptly and in giant steps, so that time is also pressing for companies. Ms. Superti said: „The thing is that there is a little bit of time, but that time should be well used, and we are using it in order to prepare well". And Mr. Paccanelli added: „And this is the communication to the industry because companies need to realize that, let's say, between 2024 and 2030 there will be a big impact on the industry. And that is what they should know and they prepare themselves. 2024 to 2030 will be a period in which legislation will be from digital passport, you know, the eco-design, all the waste management requirements. It's really changing a lot."

Finally, Mr. Paccanelli sums up his ideas in a nutshell. „What is important is the competitiveness check [...] that legislation will make us more competitive than before, provided we are able to implement. It's very important that we are not destroying the industry while implementing something that becomes the orientation and allow greenwashing from imports. That is the reality. Because today we are in a tear-like knot. Nobody is really understanding what is real and what is fake in terms of sustainability. [...] There is a lot of greenwashing today because the legislation is not there. The idea is to have good legislation, good controls, so that the good companies will be able to compete better than before."

[www.euratex.eu](http://www.euratex.eu)

<https://op.europa.eu/en>



# 中国国际纺织机械展览会 暨ITMA亚洲展览会 ITMA ASIA + CITME 2020



2023年11月19-23日 中国上海  
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# ITMA ASIA + CITME 2022

## WITH THE MOST IMPORTANT TEXTILE MACHINERY TRADE FAIR IN ASIA, THE INDUSTRY IS FINALLY RETURNING TO NORMALITY

**It won't be long now until Asia's leading business platform for textile machinery, ITMA Asia 2022, which was postponed by one year in September 2022 due to the Covid-19 pandemic, can finally open its doors again in Shanghai from November 19 to 23, 2023. It is about time, because on the one hand China is urgently needed as the most important engine of the global textile industry and on the other hand China wants to modernize its textile industry and gradually bring it up to the highest standards, so that it will also be of vital interest for Chinese textile companies to be able to see the latest innovations, that have just been shown at ITMA 2023 in Milan, live on site.**

To-date, over 1,400 exhibitors from 24 countries and regions have applied to take part in the combined exhibition. Six exhibition halls of the National Convention and Exhibition Center grossing over 160,000 square metres have been booked, according to the show owners - CEMATEX and its Chinese partners, the Sub-Council of the Textile Industry, CCPIT (CCPIT-TEX), China Textile Machinery Association (CTMA) and China Exhibition Centre Group Corporation (CIEC).

Exhibitors are also buoyant about prospects as China's economy is projected to be performing better than expected. The International Monetary Fund (IMF) recently revised its forecast for China's GDP growth upwards to 5.2% in 2023 from its previous projection of 4.4% last October. The third quarter also showed that China is on the right track here, as the economy was able to surprise once again. GDP grew by 4.9% year-on-year, according to data published by the National Bureau of Statistics, while analysts had only expected an increase of 4.4%.

"The reopening of China's economy is pivotal for the region as China is a key driver of the expansion. Such positive news has helped textile machinery manufacturers to rebuild their confidence in the China market," explained Mr Ernesto Maurer, President of CEMATEX, which owns the ITMA and ITMA ASIA exhibitions. He added: "We salute our exhibitors for keeping faith with us. Not only have they not withdrawn their participation, some have even increased their booth space. We have also received a steady stream of enquiries from new applicants."

Mr Gu Ping, President of China Textile Machinery Association, further commented: "Compared with the previous combined exhibition, the number of exhibitors in this edition has increased by 15 per cent. We welcome the presence of these new enterprises as they will add to a more diverse showcase of the technological innovation, and provide new vitality and impetus for the development of the textile industry."



Trützschler booth at ITMA 2023  
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Saurer booth at ITMA 2023  
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Mr. Wang Shutian, honorary president of China Textile Machinery Association (CTMA), had already given an outlook for the trade fair in 2022 against the backdrop of the country's technological transformation. He said: "China's 14th Five-Year Plan has set the direction for building our economy into a manufacturing powerhouse that emphasises technological innovation, promotes industry collaboration and prioritises sustainability. In line with this plan, ITMA ASIA + CITME remains committed to be the most effective business platform for buyers to explore advanced manufacturing technologies."

The last edition of ITMA ASIA + CITME 2020 wrapped up successfully in June 2021. Grossing over 160,000 square metres of exhibition area, the combined exhibition hosted 1,237 exhibitors from 20 countries and regions and attracted visitorship of about 65,000 from 30 countries and regions over 5 days. However, since the 2022 trade fair was still completely under the influence of the pandemic and entry to China was possible but subject to certain conditions, it must be assumed that the figures mentioned will be clearly exceeded this year. This is already evident from the increase of over 200 exhibitors and also from the numerous announcements by international exhibitors that they will also be on site with European employees. This means that ITMA Asia will once again become a truly international trade fair and live up to its character as the second most important trade fair in the world.



Savio booth at ITMA 2023  
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Autefa Solutions booth at ITMA 2023  
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DILO booth at ITMA 2023  
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### HIGH EXPECTATIONS LEAD TO BIGGER STANDS

Many exhibitors have also increased their booth space after China eased its strict COVID rules and reopened its borders earlier this year. Among the exhibitors who have increased their space since the Chinese government's announcement early this year are Muratec, Saurer, Savio, TMT Machinery and Trützschler.

Mr Harald Schoepp, Managing Director of Trützschler China, said, "We have decided to enlarge our booth space because our outlook for the Chinese market is very positive and we expect more overseas visitors now. We are going to present Trützschler's latest machinery and solutions for the spinning, non-woven and man-made fibre industries."

### LATEST TECHNOLOGY WILL BE ON DISPLAY

In the run-up to the trade fair, numerous exhibitors have announced that they will be presenting the latest technology at ITMA Asia 2022, which they first showed at ITMA in the summer. This will make ITMA Asia the second big parade of innovations designed to secure the green future of the global textile industry. Although the major sustainability trends and the associated new laws are still mainly coming from Europe and the USA, Asian textile manufacturers will also have to adapt their production to these laws if they want to earn money from exports. Low labor costs and more lax environmental regulations will play a lesser role in the future of textiles than in the past, as at worst there is a threat of import bans or at best sustain-



Oerlikon booth at ITMA 2023  
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itema booth at ITMA 2023  
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ability levies, which will destroy the previous high competitiveness of prices. At least the European textile and clothing association EURATEX is committed to such fair competition for all participants and, as the representative of its members' interests, will certainly be a correspondingly tough sparring and negotiating partner for the European Commission. This impending transformation, as well as the changes in China itself defined by the 14th Five-Year Plan will therefore lead to Chinese technology buyers orienting themselves towards the best machines and being eager to examine the latest innovations and thus future-proof their production.

## A SMALL SELECTION OF EXHIBITORS

Oerlikon invites all trade fair visitors to engage in a dialog with all its experts at its booth in hall 7, A55. On more than 225 m<sup>2</sup>, Oerlikon will give answers to the urgent questions of the present and the future. Oerlikon will be presenting the latest developments, including the revolutionary new Oerlikon Neumag EvoSteam staple fiber process, the long-awaited ACW WINGS upgrade, the Oerlikon Barmag Wiping Robot, the Oerlikon Barmag Digital Twin and Oerlikon Nonwoven's HycuTEC inline charging technology.

Saurer's innovations that excited the textile world in June 2023 will be presented live in Shanghai to textile experts from the Asian market. Saurer is looking forward to welcoming customers on booth A 47 in hall 8 to showcase all the latest innovations. Live exhibits on the booth are Autocard SC 7M, Zinser 51 ring spinning machine, BD 8 and Autocoro 11 rotor spinning machines, Autoairo air spinning machine, and the new PrimeTwister. Texparts components, updates and upgrades and the Fibrevision product range will also be on display.

Loepfe (H7, C32) is taking a new approach and inviting visitors to witness firsthand the remarkable advantages Loepfe users experience with its cutting-edge sensor technology. Profitable, efficient, and easy with a high-quality output - that is what Loepfe stands for.

From automation in the weaving mill to the delicate process step of shed formation – even for the most complex Jacquard fabrics – Stäubli Textile (Booth E01 in Hall 3) will present an overview of solutions designed for performance, durability, and thus profitability of the weaving mill. Visitors can pick up the latest edition of the customer magazine Stäubli Flash, packed with product information, success stories, and information about the Stäubli Group in China.

Visitors to Picanol will be able to discover five different high-tech weaving machine types and the PicConnect digital platform in Hall 3, Booth C11. Picanol will have five weaving machines on display: the latest Ultimax rapier machine as well as the GTMax-i 3.0 Connect, and a GTMax-S Connect rapier machine. In addition, two of the OmniPlus-i Connect air-jet weaving machines will be shown.

Catering to the high-tech transformation of China's textile manufacturing industry, Eltex has rolled out a suite of intelligent solutions built on a proven robust quality framework. Its EYE and EyETM systems are capable of accurately and efficiently monitoring the movement and tension of more than 1,000 yarns simultaneously.

Heberlein has applied its expertise to develop a unique air-saving solution for a smooth and efficient weaving process. The Heberlein WarpJet-KV needs up to 38% less compressed air compared with other jets. First-hand information is available at Stand A43 in Hall 8.1 – and the key details are presented here.

Digitize your  
processes!

INDUSTRY  
4.0



During the trade fair, Karl Mayer invites to a product show in the showroom at KARL MAYER (CHINA) in Changzhou City, where they will be demonstrating the new RASCHELT-RONIC® machine, which was launched for worldwide sale at ITMA 2023 and is a complete success. Here, RJ 4/1 EL in E 32 will be producing a soft, lightweight lingerie fabric made of polyamide and elastane. Interested parties are asked to register via the Karl Mayer website.

Of the 5 knitting machines SHIMA SEIKI is exhibiting at its 400 sq. meter booth located at Hall 4, Stand D20, three will be WHOLE-GARMENT® knitting machines, two of which are SWG-XR® machines. One will be a prototype machine that will demonstrate knitting of a high-quality 18G pullover in all needles, while the other will be paired with the optional i-DYCS® intelligent Digital Yarn Changer System to knit a 34-color item.

Monforts points to a significant change, as the largest market for Chinese products is now its own. Monforts wants and can do a lot to ensure that all markets continue to grow sustainably and is looking forward to many fruitful discussions in Shanghai. Particular focus will be on solutions for greater energy efficiency such as the Monforts ECO Booster and the Monforts Energy Tower, both of which can also be retrofitted. Two major areas of specialism for Monforts technologies are in denim production and the finishing of a wide range of technical textiles. Over 900 Monforts Thermex hotflue dyeing systems

are now operational in the main textile producing countries, with around 150 of them already reaping the benefits of the Econrol® and Econrol®T-CA processes. The latest innovation for denim manufacturers is the CYD yarn dyeing system. Of course the Montex®-Coat coater is also of importance. IT meanwhile serves a very diverse number of markets and enables full PVC coatings, pigment dyeing or minimal application surface and low penetration treatments, as well as solvent coatings to be carried out.

Mahlo will present its systems and solutions for efficient and high-quality textile production and finishing together with Shanghai Kuantex at booth H5-C28. The focus will be on the machine manufacturer's new straightening concept.

SETEX will introduce its integrated turnkey solution for the factory of the future in Hall H5 Stand D17, providing cutting-edge technology designed to maximize production efficiency, resource efficiency and reduce carbon footprint.

Together with their partner Smart Indigo, Sedo Treepoint combines sustainability and performance at its booth in hall 5 booth C25 and will be presenting its innovative solutions. For example, the automation specialist will be showing the Sedomat 8000 and 6007 series in interaction with the latest innovative jet and yarn software as well as software innovations ColorMasterConnect and TEXconnect to save money and resources.



Stäubli booth at ITMA 2023 © 2023 TexData International



Groz-Beckert booth at ITMA 2023 © 2023 TexData International



DORNIER booth at ITMA 2023 © 2023 TexData International

Baldwin will be educating the textile supply chain on how to “Start with Baldwin and Finish with Perfection” thanks to its TexCoat™ G4 precision spray finishing system at Stand H5C22.

The importance of the largest textile machinery trade fair in Asia and, above all, the most important and decisive trade fair in China for European textile machinery manufacturers against the backdrop of the complete re-opening of the Chinese market is also shown by the great commitment of the important associations ACIMIT, Swissmem and the VDMA.

### ITALY OFFERS COST REDUCTION AND SUSTAINABLE TEXTILE PRODUCTION

The Italian association ACIMIT announced in the run-up to the trade fair that Italian technology will once again be on full display, showcasing innovative, sustainable solutions. A total of 59 Italian machinery manufacturers will be exhibiting. Of these 59 manufacturers, 26 will be presenting technological innovations as part of the National Sector Groups, organized by ACIMIT and ITA – Italian Trade Agency. Occupying a surface area of around 2,000 square meters, Italy is among the major foreign exhibiting Countries at the event, as has been the case for previous editions as well. Asia is a major destination for Italy's textile machinery manufacturers, with fully 38% of all Italian textile machinery exports during the first half of 2023 (amounting to roughly 338 million euros) directed towards Asian markets. China, in particular, is an absolutely

important market for Italian companies: the first in Asia and the second worldwide behind Turkey in 2022. In the first six months of this year, Italian machinery sold in China reached a value of 81 million Euro.

"The general outlook for the Chinese market remains positive, although the demand for foreign machinery from local textile manufacturers has slowed somewhat for this first half of the year," comments ACIMIT president Marco Salvadè. "Investments in the textile industry have never stopped, so there is no shortage of opportunities in China. I believe ITMA ASIA + CITME will confirm our expectations for a recovery in demand."

ACIMIT also sees a probable reorientation in the decision-making processes of buyers. It postulates that the demand for machinery in China is mainly focused on technologies that can combine savings in production costs with environmentally friendly solutions. "My belief is that to increase competitiveness at a global level, China's textile manufacturers – just like those of other Countries – need to focus on the digitalization of production processes, as well as on sustainable technology solutions. In this regard, Italian technology can certainly satisfy these needs, proposing innovative processes designed to enhance sustainability and digitalization, something which visitors at the fair will be able to see for themselves," Salvadè concludes.

For his part, Augusto Di Giacinto, Italian Trade Commissioner in Shanghai, states that, "ITMA ASIA + CITME has returned to Shanghai after two years, with a full reopening of the Chinese market, a significant statement that marks a reprise for the entire sector.

In fact, ITMA ASIA + CITME continues to be one of the most important events for Italian textile machinery sector, one highly awaited event also for Chinese operators increasingly sensitive to quality, innovation and the ability of Made in Italy to combine technologies that can bring together cost savings with product sustainability. And we need to keep in mind that over 40% of all Italian exports to China is made up of capital goods and innovative technologies that are especially appreciated by Chinese product manufacturers."

ACIMIT will be present at ITMA ASIA + CITME 2022 at the INDUSTRY INFORMATION HUB, with its very own Hot Desk.

#### **WORLD-CLASS TECHNOLOGY, LOCAL SUPPORT BY SWISS COMPANIES**

SWISSMEMS' message ahead of the trade fair is Swiss machinery manufacturers are ready and able to support the future goals of China's textile manufacturers. The importance of the Chinese market and thus also of the trade fair is summed up by Cornelia Buchwalder, Secretary General of the Swiss Textile Machinery Association: "China is the main market for a large number of our association members." 15 association members look forward to seeing their many customers again – and meeting new ones.

# SAURER.

## Autocoro 11 – Recycling Xtreme.



### Autocoro 11 for the toughest recycling challenges

Recycled material with a particularly high share of short fibres and an extremely high dust content pose no challenge for the new Autocoro 11. Equipped with Recycling Xtreme edition, the Autocoro 11 offers more productivity, longer cleaning intervals and better package quality.

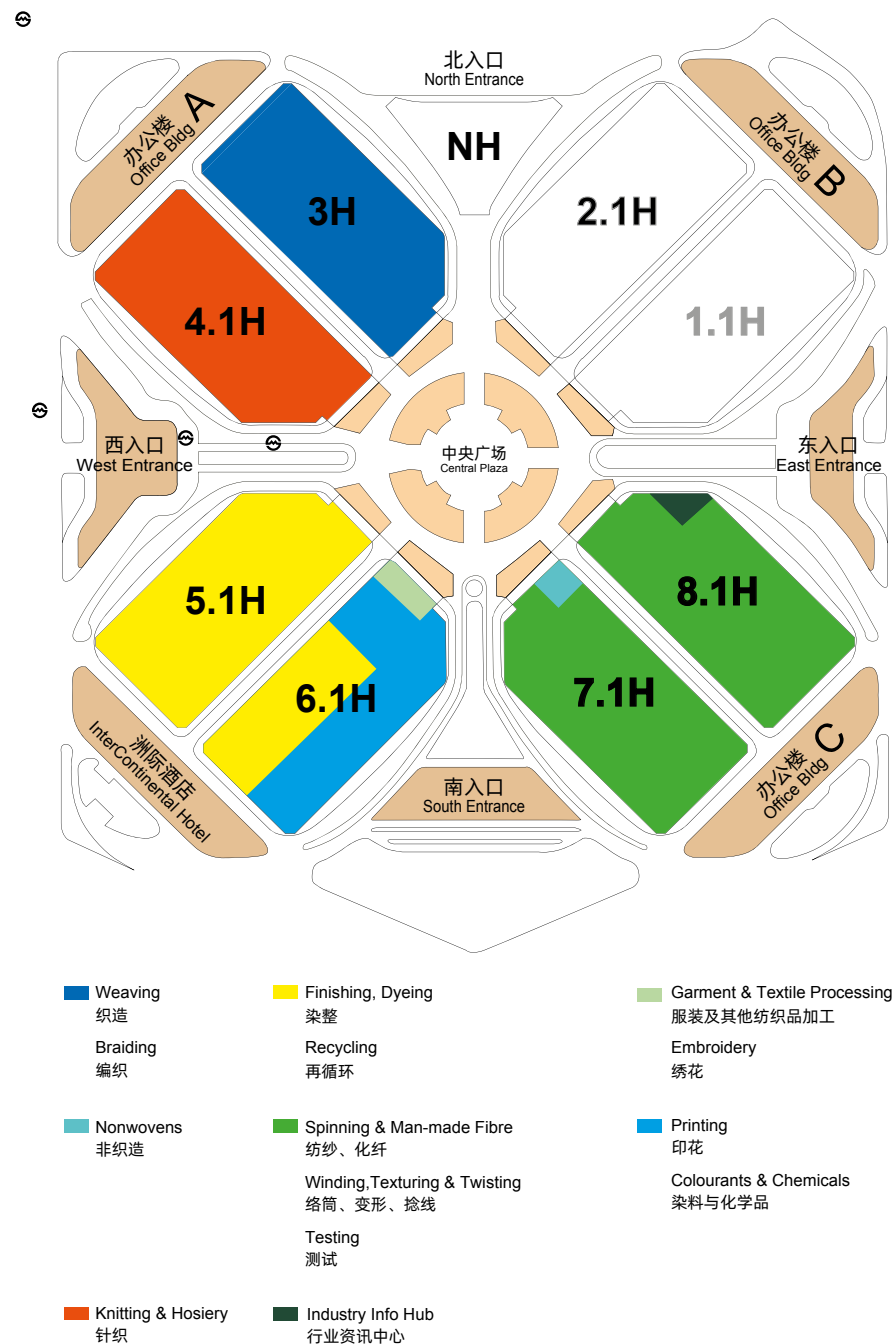
[saurer.com](http://saurer.com)

Swiss companies realized many years ago that geographical proximity is the key to success. For example, Stäubli has started to set up offices in Chinese cities since 1998 and counts 12 locations today, to serve the whole country. In 2002, Iteima established a centralized local branch which today has 160 employees in various functions. Loepfe has expanded its presence by creating an independent local business unit to overcome the 9,000 km distance by air, while Uster Technologies has had a Chinese subsidiary since 1982, with offices and service stations in different provinces. Luwa set up its offices and workshop in Shanghai in 1997. Rieter established a presence in mainland China in 2005, driven by a strong commitment to expanding the country's know-how and expertise – and ten years later opened an advanced research center. "We are firmly committed to delivering the cutting-edge technology and textile expertise to help the Chinese spinning industry stay at the forefront of innovation," says Thomas Oetterli, CEO Rieter Group.

All Swiss companies with serious business goals in China have made similar commitments to connect with customers and maintain strong relationships. "Geographical proximity allows the companies to adopt a strong customer-centric approach and provide more effective local installation support, training, and field services to customers," says Frank Naef, Head of Marketing, Loepfe Brothers.

Swiss companies also understand that Chinese customers require dedicated attention, and that speed is more essential than ever in delivering both machines and services. China's move towards self-sufficiency is a continuing trend. Stäubli has developed local products for the Chinese market and built long-standing partnerships with many local companies. "The technical development of the partners goes hand in hand with our local competence, which we have built up in Hangzhou over the years," says Fritz Legler, Textile Marketing Officer at Stäubli. Developments in new technology and automation are taking Chinese mills further into the digital age, with machinery incorporating intelligence and high engineering performance.

Manufacturers in China are seeking cost-effective solutions to remain competitive, while consumers are looking for value in their purchases. Companies need to develop solutions that provide tangible economic benefits to their clients. Furthermore, energy savings have become paramount in China, due to the government's commitment to environmental sustainability and reduced carbon emissions. "Businesses are adopting more energy-efficient processes and technologies to meet stringent energy conservation and emission reduction targets," says Peter Schnickmann, Managing Director at Luwa Air Engineering (Shanghai). He notes an investment trend for solutions helping Chinese companies cut operational costs and minimize their carbon footprint.



The following sectors can be found in several halls: Logistics, Software, Equipment for Plant Ops, Services for Textile Industry, Research & Innovation. 在数个展厅中分布如下工艺: 物流、软件、机器和装置操作、纺织工业的服务、研究与创新。



Benninger booth at ITMA 2023  
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Brückner booth at ITMA 2023  
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Monforts booth at ITMA 2023  
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SantexRimar booth at ITMA 2023  
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To enhance the reputation of both companies and products – and boost the image of the entire industry – the environmental impact needs to decrease. Priorities are saving water and waste, as well as reducing, replacing or completely eliminating the use of harmful substances. China has a strong demand for environmental-friendly solutions and sustainable technologies. “China is an important business partner for Benninger demanding salt-free dyeing solutions, water consumption figures and modern dispensing systems,” says Rolf Erik Schoeler, Head of Sales & Marketing at Benninger Group.

The association also points out that Swiss companies always have the right solutions for all sectors of textile production. For spinning, they offer automation and digitalization technologies as well as state-of-the-art spinning machines for all spinning processes to enable the latest, most demanding yarns to be spun with maximum productivity. Chinese weavers require advanced technology with ever higher efficiency standards.

In weaving preparation, the latest solutions offer the speed, quality and reliability required today, as well as automation. Weaving machines offer state-of-the-art eco-efficiency, improved performance and greater user-friendliness. In addition, high-quality solutions support the special requirements for weaving technical textiles.

The same applies to the production of non-wovens and textile finishing. Here in particular, state-of-the-art machines can be used to meet the highest sustainability targets for textile products.

### GERMANY OFFERS SMART TECHNOLOGIES FOR GREEN TEXTILE PRODUCTION

40 VDMA members will present their technologies and solutions for the Chinese and Asian markets under the heading “smart technologies for green textile production”. They cover nearly all different machinery chapters with a focus on spinning and man-made fibers, nonwovens, weaving, braiding, knitting & hosiery, finishing & dyeing and textile processing. The VDMA Textile Machinery Association and VDMA China will be present in the industry hub in Hall 8 zone B to support the members before and during the fair. The industry hub is also contact point for visitors who want to inform themselves about the exhibiting VDMA members.

### CONCLUSION

ITMA Asia 2022 is now opening its doors a year late. However, this circumstance, due to the pandemic, could ensure that it will be an outstanding event, because the technology on display has never been so fresh. If you also consider that the Chinese presence at ITMA in Milan was not so high, the technology is likely to attract a highly interested audience. In any case, the trade fair will be trend-setting.

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**ITMA 2023 REVIEW**

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### ACIMIT

[WWW.ACIMIT.IT/EN/](http://WWW.ACIMIT.IT/EN/)

### SWISSMEM

Information about exhibitors from the Swiss Textile Machinery Association and their booth locations is available at:

[WWW.SWISSTEXTILEMACHINERY.CH/STORIES/ITMAASIA-BOOTH-LOCATION](http://WWW.SWISSTEXTILEMACHINERY.CH/STORIES/ITMAASIA-BOOTH-LOCATION)

### VDMA

Information about VDMA members exhibiting is available at:

[WWW.VDMA.ORG/ITMA](http://WWW.VDMA.ORG/ITMA)





# A FABULOUS ITMA 2023 SHOWED A GLIMPSE INTO A NEW, SUSTAINABLE TEXTILE FUTURE

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MANY INNOVATIONS IN THE FIELD OF  
OPTIMIZATION THROUGH DIGITALIZATION, IN  
THE PROCESSING OF RECYCLED MATERIALS  
AND IN THE EFFICIENT USE OF ENERGY AND  
RESOURCES



ITMA 2023

08 — 14  
JUNE 2023

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The 19th edition of ITMA, held in Milan, Italy, from 08 to 14 June, was able to demonstrate very successfully, as usual, its immense radiance and innovative power as the largest and most important exhibition of the international textile machinery industry. The 1709 exhibitors from 47 countries, the nearly 200,000sqm of exhibition space, the 173 supporting organizations and, above all, the remarkable 111,000 visitors from 143 countries illustrate this on a factual basis.

Above all, however, the outstanding importance of ITMA for the industry was once again demonstrated by the successfully occupied themes on the challenges of our time and the innovations corresponding to them that were shown at the fair. The main theme of the fair 'Transforming the World of Textiles' corresponds to the task of the near future and was comprehensively occupied with solutions by the exhibitors. Textile manufacturers were able to receive guidance on how technology will assist them in transforming their business into a successful future.

But let's start at the front, at the start of ITMA 2023, to understand its peculiarities and what is special about the character of this year's edition. First of all, everyone involved was happy that ITMA 2023 could take place at all, as usual. The shock of the pandemic had not yet been completely shaken out of their clothes, and this is understandable considering that we were only able to start the first vaccination worldwide two years ago.

Accordingly, in his opening speech, CEMATEX President Ernesto Maurer talked about how happy he was that it was really happening, that he could now open ITMA. With a twinkle in his eye, he described the timing of ITMA as perfect. It was before the pandemic in 2019 and now again in 2023.

He then spoke about the motto of ITMA 2023, "Transforming the World of Textiles," following the motto "Mastering the Art of Sustainable Innovation" in 2015 and the motto "Innovating the World of Textiles" in 2019. Somewhat provocatively, he asked if nothing has happened in the industry since 2015, that the leitmotifs are so similar, and answered himself with a clear no. On the contrary, he thinks that the current motif "Transforming the World of Textiles" fits the current situation as well as hardly any before - especially with the experiences of the pandemic and the current developments in the world.

He said, "If I had stood here in front of you in 2019 and predicted what was going to happen in the next four years, I think I would have been taken to an empty room. No one would have believed me, would they? And now that we are here in Milan, we know that we have mastered all these things, which was not very easy for all of us, not very easy for the whole world community. But we have survived, and the textile business is a survivor. We all know that the textile industry is thought to be dead or doomed in many countries, but that's not true, and I'm very happy that ITMA 2023 is now reopening stronger than before. We have 4% more exhibitors than in 2019, and I think that situation reveals that ITMA Europe is more important than ever. We are the Olympics of textile machinery."



A never-ending stream of visitors at ITMA 2023  
© 2023 TexData International

The CEMATEX president then thanked the show's organizers, mentioning in particular ITMA Services and the Italian textile machinery association ACIMIT. He warmly thanked its President Alex Zucci and his team for their hospitality and hard work over the past months. Literally, he said, "When I look at the exhibition center here, it is an absolute masterpiece of organization."

However, in glorious weather, the fairgrounds also displayed all the splendor of Italian design. The sun was shining all the time and therefore the outdoor areas could be used optimally. Large electronic display panels and screens on the connecting paths showed what was happening at the fair and changing fair highlights, thus providing orientation and whetting the appetite. Admission and distribution of visitors went smoothly and quickly. In the halls themselves, everything was as usual: booths, lights, messages, technology, people, noise and encounters. If there was still a certain skepticism before the fair whether the visitors would also come in droves, whether the VISA could be issued on time and whether the market situation would also allow the visit of the entrepreneurs, this question was quickly answered. About an hour before the start of the fair, the forecourt had already been completely filled with visitors and provided a positive start signal. This continued. From the first to the last day, many visitors continuously streamed to the fair and ensured happy faces among the exhibitors and a very good mood at the fair.

## VISITORS FROM EUROPE DOMINATE

Let's look at a few numbers. Overall, the quadrennial event had a record attendance of 111,000 visitors from 143 countries. That was 6,000 more visitors than in Barcelona in 2019. Certainly also justified by the textile location Italy, which represented the largest part of the visitors with 29.9%. Next came Turkey with 6.3%, Germany with a remarkable 6.2% and India with 6.0%. This was followed by France with 4.4%, Brazil with 2.9%, Spain with 2.6%, Switzerland with 2.5% and the USA with 2.3%. China, no doubt due to the pandemic and the ITAM Asia coming up shortly, only came in at 1.9%. If you look at the continents, Europe is here with 67% with about two-thirds of the visitors. Asia and Australia follow with 20%, America as a whole with 11% and Africa with only 2%. Particularly striking, in addition to the very high participation from Brazil, is certainly the exposed number of Europeans with an overall high number of visitors. Considering that textile production takes place mainly in Asia, one could speculate whether this number is already an indicator of a change of direction or a "re-shoring".

## DECISION MAKERS FROM TEXTILE PRODUCTION

In terms of visitor profiles, the evaluation of "ITMA Services" shows the remarkable number of 37% decision makers. This illustrates once again that ITMA is the trade show where decision-makers want to experience technology for themselves and cultivate their network. 18% of visi-

tors describe themselves as preparers for decisions, 11% as information gatherers and 6% want to take a closer look at a specific product. The remaining 28% made no statement.

The evaluation of the visitors' fields of activity proves once again the high quality of the visitors at the trade fair. 24% come from yarn and textile manufacturing and another 18% from garment manufacturing. They are complemented by 16% from specialists in textile processes, so that the total of visitors involved in the manufacturing process itself is 58%, just over half. If this is supplemented by the 11% of agents who are intermediaries at many points in the supply chain, we get around two-thirds of the number of visitors for textile production. The other visitor groups are the machine builders with 10%, the textile chemical industry with 3% and the service providers as well with 7% as the group of others. We consider the visitors from the Brands & Retail sector to be remarkable, representing as much as 4% of the visitors. This shows once again that they have moved closer to textile production and are finding out for themselves what technology can do to help them achieve their goals in the implementation of high and highest targets for sustainability as well as to meet the challenges of the EU textile strategy.

Among the sectors, fabrics are somewhat surprisingly at the top with 9.3% and fibers and yarns with 9.1%. Among the machinery sectors, knitting together with finishing is ahead with 6.9% each.



CEMATEX President Ernesto Maurer  
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Chair of "ITMA Services" Regina Brückner and  
Ernesto Maurer © 2023 TexData International



Mr Ernesto Maurer, President of CEMATEX, and Mr Gu Ping,  
President of CTMA, have signed the contracts for  
ITMA Singapore © 2023 TexData International

This is followed by spinning together with winding with 6.3% and weaving with 6.0%. Digital printing comes in at 4.5% and nonwovens production at 2.4%. 5.1% mention recycling as an area of interest and 3.3% waste prevention and environmental improvement. At 5.1%, the interest in recycling is striking, but also puzzling. Against the background that recycling will be the dominant topic of the next years, the value seems small compared to the figures of the individual sectors and considering the fact that the specific technical problem of recycling does not directly affect all processes, it is quite high.

The CEMATEX President also provided some figures in his speech and gave a picture about the exhibitors, which he additionally commented. According to him, 417 exhibitors came from Italy and together they occupied 37% of the space, more than one third. Germany was second with 197 exhibitors and Switzerland third, which he was proud of as a Swiss. Together, the three countries occupied 57% of the exhibition space. Ernesto Maurer commented on the result as follows: "This is impressive. We are in Europe, and three countries take up more than half of the exhibition space." Add to this the other larger countries of machinery manufacturers, such as Turkey, China and India, and the result is over 80% of the exhibition space occupied by six countries. For Ernesto Maurer, another example of the Pareto 80-20 rule.

### DRIVE CHANGE OR BE DRIVEN

At the end of his speech, Ernesto Maurer then came back to the exhibition theme, stressing that the issues of sustainability, sustainable production and sustainable textiles have become much more important in the last four years than they ever thought and that the industry should do a better job of driving this sustainability.

He said, "For me, it is very important that we really follow through on this issue of transforming the textile world. I have a saying there, and it won't surprise you. You either drive change, or you are driven by change. And I think all of us here are convinced that we have to drive change or not be driven by change. We have a lot of players in Europe. We have some very creative people in Brussels who have never seen the inside of the factory. But we have to drive these changes ourselves. Otherwise, we will be driven by creative people who have never seen a factory. So that's the issue for me. We are in the process of changing. We're actively changing the world of textiles."

### TAKE CONCRETE ACTION TO MODERNIZE

Regina Brückner, Managing Director of Brückner Trockentechnik, also spoke in her role as Chair of "ITMA Services", the organizing company founded by ITMA to run the show, about the important topics of the era for the textile industry, which were occupied by ITMA.

She also referred to the motto of ITMA 2023 and mentioned the supporting trend themes of advanced materials, automation, digital future, innovative technology, sustainability and circular economy. Ms. Brückner again pointed out that ITMA has always been a launching pad for innovations and breakthroughs over the past 70 years.

However, she said, the textile industry is now under scrutiny, and breakthrough technologies are on the way. Ms. Brückner called the technologies very important for everyone to work together and make sure we all have a better and safer planet by saving energy, resources and other things.

She said, "We hope the theme will inspire the entire industry to take concrete action to modernize and future-proof their businesses. In the age of Industry 4.0, the focus is on digitalization, and of course artificial intelligence, automation and robotics. Europe is facing and has to deal with climate change, and there are other challenges and regulations from the European Union, other industries and other countries. We have to tackle them. That's our duty as machine builders and also our duty as people in the industry."

In closing, Regina Brückner again pointed out that the most important thing for them as organizers is, of course, that ITMA is and remains the most important trade show.



Full of happiness and pride, the winners of the ITMA Sustainable Innovation Award and ITMA Research & Innovation (R&I) Excellence Award present their prizes and certificates © 2023 Cematex



Congratulations from ACIMIT President Alex Zucci to Gianluigi Candiani and Alberto Candiani © 2023 Cematex

## INNOVATION IS EVOLUTION

These are pithy and correct words and at the same time an obligation for ITMA to live up to these claims. Whether it succeeded in the result is certainly the judgment of a subjective consideration of the individual visitors and exhibitors. Objectively, ITMA did indeed address the major megatrends such as automation, digitalization, sustainability and recycling. The exhibitors' innovations were found in these areas, even if old key figures such as productivity and price continued to play their role. They were now often grouped into sustainability, because productive is often a sub-concept of sustainable when it comes to energy use, for example. What was striking was that there were few radical solutions, little so-called revolution. Innovation was evolution and, with few exceptions, the exhibits were aimed in the direction of optimizing and further developing existing solutions and concepts already presented. As a rule, the aim was to make what already existed fit for a new future. The wheel was rarely reinvented, and completely new procedures and processes remained the exception. This may be due to the fact the topics of our time are not really new. Sustainability, environmental protection, waste avoidance and recycling, as well as automation and digitization are topics that have been driving the industry for many years and for which niche solutions or at least clear concepts and studies already existed in the portfolio that have now been brought more to the fore.

## GAMECHANGER PROCESSES

In the editorial we wrote that at first glance ITMA 2023 was not that exciting for technology enthusiasts because, for example, innovations and improvements in data acquisition, processing and visualization are not easy to visualize but require explanation. The limited vividness is particularly evident in the case of saved processes, where the gap has to be highlighted. Discovering the innovation thus rarely happened at first glance; it required an examination of the solution. Those who looked for it found a mass of innovations that actually symbolized a first big step to transform the textile industry into a new direction.

The two new developments from the house of **Dilo** can certainly be described as outstanding. The innovative production processes of the specialist for needling technology in the nonwovens sector deserve a great deal of attention, as they show that on the one hand ingenuity and on the other outstanding tenacity can lead to resounding success. Dilo, for one, has introduced a needling technology called MicroPunch, which can be used to produce low basis weight nonwovens for the first time, and whose use offers numerous advantages in terms of energy and water savings compared to the water jet process previously used. The process is based on the idea of densification and immense increase in the number of needles, and the current success is based on decades of development work. The needles were developed by market leader Groz-Beckert,

which once again underlines how effective cooperation between specialists can be. Secondly, Dilo has also set an example in the use of recycled materials, again as part of a cooperation. Together with the specialist for tearing machines from Italy, the company Dell'Orco, Dilo has succeeded in decisively improving the results for nonwovens production by providing and using fibers of significantly greater length. The approach developed to gently "tear" the old textiles could set an example for the entire textile industry, because when using natural fibers for the recycling process, the greatest challenge to date has been to get to grips with the significantly reduced fiber length and thus the strength of the new yarn. As at every ITMA, Dilo must of course be praised once again for having a complete needling line, in this case the brand new "MicroPunch" technology, live in operation at the ITMA and demonstrating production from bale opening to end-of-line winding of the product. The Dilo team installed this complex line within 10 to 12 days including commissioning demonstrated its capabilities under high time pressure. It gave an example to all involved with their efficiency, coordination and professional attitude.

Another excellent feature was certainly an innovative new development from **Oerlikon**, the EvoSteam process for the production of PET staple fibers. When developing the EvoSteam process, the engineers focused both on fiber quality and in particular also on sustainability, energy efficiency and reducing the consumption of resources.

Compared to conventional staple fiber systems, an increase in efficiency of up to 12%, a reduction in production waste of up to 50% along with energy savings of up to 8% speak a very clear language. With water savings of up to 10 million liters per annum and a lowering of the carbon footprint by up to 20%, this Oerlikon system helps fiber manufacturers achieve their sustainability targets.

The new **Trützschler** TC 30i card is certainly also outstanding, because it is incredibly difficult to make such an advanced technology even better. With the intelligent and automatic T-GO gap optimizer, the Trützschler card has a patent-protected technology that ensures the right carding gap setting precisely so that the best possible yarn quality is always achieved. Based on this, further optimizations have been made. For instance, the TC 30i includes a new suction system that cuts costs and boosts sustainability because it separates higher value card waste from the remaining waste. This valuable material can be turned into additional revenue.

Another process that can certainly be described as a game changer comes from German **Thies**. With the new "Signature" machine, the manufacturer of dyeing machines has presented a machine that offers all the advantages of piece finishing while drastically reducing the use of water and chemicals thanks to a completely newly conceived process. The idea here is to make the dye react so intensively and uni-

formly with the cloth, using very little water, that only very little water needs to be used in the subsequent processes. This saves water in large quantities and also energy.

As usual, a great deal of innovation, which is of enormous importance for the entire industry, comes from **Jeanologia**. The garment finishing specialist has unveiled a machine that may help address the issue of microfiber pollution in the environment. Using a combination of dynamic airflow and microfiltration, the new "Air Fiber Washer" can capture 60% of microfibers during garment production. Since the microfiber issue has brought the use of manmade fibers into disrepute almost more than the oil needed to produce them, such solutions are of paramount importance. Without manmade fibers, it would be impossible to meet the world's demand for textiles, leaving the industry with a dilemma.

As is to be expected, progress of a formative nature is also coming from research at universities and institutes. The Institute for Textile Technology at the University of Aachen (**ITA**) presented a ring spinning machine capable of producing ring yarn with a high proportion of recycled materials. This was previously considered technically difficult to the point of impossible. For recycled fibers, the rotor spinning process has been established so far, but ring spinning is known to be preferred for many types of yarns.

**Further innovations, which are not necessarily inferior to those mentioned, can be found in the review of the exhibits of the individual exhibitors.**

#### **GREAT SATISFACTION AMONG EXHIBITORS**

Following ITMA 2023, exhibitors reported almost unanimously that they were very satisfied with the number of visitors, the quality of the discussions and the interest shown by customers in buying. Numerous exhibitors reported deals that were concluded at the trade fair.

In addition, some exhibitors, such as **MAHLO** Managing Director Rainer Mestermann, mentioned that they had not expected ITMA to attract so many visitors given the current political and economic situation.

Also, Benjamin Mayer's expectations of this year's ITMA were moderate. The **Mayer & Cie.** CEO said. "War, high energy prices, inflation and recession are the signs of the times. Not even an ITMA is going to change that." The Mayer & Cie. management therefore judged its success not by the general demand but by the positive visitor feedback. "For us that was an indicator of our future competitiveness," said Mr. Mayer, "and we can definitely be sure of that with our developments." So, Mayer & Cie.'s verdict on ITMA 2023 is very good to good.

**DILO** reported that all seven days were highlighted by a stream of visitors to the Dilo stand which gave prominent attention to a complete production and demonstration line of MicroPunch technology.

**Groz-Beckert** published they were able to present its numerous innovations to more than 7,000 customers and business partners, as well as welcoming many other visitors to its booth – including over 280 students. An international audience gathered at the Groz-Beckert booth: guests came from 84 different countries. The majority of visitors came from Italy with just under 15 percent, followed by Germany with 14 percent, Turkey with 11 percent, India with 9 percent and the USA with 3 percent. For the first time, HR specialists were on hand at the Groz-Beckert booth to look after the student groups, offering the young people comprehensive insights together with experts from the Technology and Development Center (TEZ).

The **KARL MAYER GROUP** announced its stand was inundated with what could only be described as a visitor stampede - Right from day one. With just under 2,900 recorded contacts, the number of visitors exceeded all expectations significantly. The original KARL MAYER business units of warp knitting, warp preparation and technical textiles recorded a 20 to 30% increase in the number of visitors compared to ITMA 2019 in Barcelona. There was also huge interest in the exhibition by the business unit STOLL, which joined the others in 2020.

The stand area dedicated to flat knitting was the Group's busiest. Positive figures were also recorded in terms of the high number of new contacts made, which represented around 30% of the total. Many textile brands, but also visitors who did not hail from this industry, were interested in the potential with regard to sustainability and business development offered by innovations along the entire textile manufacturing chain, in which the KARL MAYER GROUP and its valuable solutions represent an important link. Mr Arno Gärtner, CEO Karl Mayer Group said: "ITMA 2023 is once again the place to be for decision-makers and experts from all over the world. Our participation with the strategic topics of sustainability and digital process solutions provided answers to current customer challenges. We had an unbelievable number of intensive discussions with our international customers. We are glad that the enforcement of IPR regulation is taken seriously at ITMA. We had successfully taken action against a case of infringement of our patent rights during the exhibition."

**Biancalani**, a market leader specializing in sustainable textile finishing machinery, met with more than 300 companies including potential and existing customers. In addition to the machines and ranges sold there were many serious contacts which sealed important agreements that had been lacking during the pandemic and are now already giving financial confirmation for new projects. The potential turnover of projects generated during

ITMA 2023 in Milan at the Biancalani stand is about 15 million euros in contracts. Potential and existing customers came to visit Biancalani from all over the world, and in order of interest the main countries were: India, Turkey, Pakistan, Brazil, Italy, Egypt and the United States. Cédric Schlicher, **Fil Control** CEO, announced that a noteworthy highlight during ITMA was the signing of a significant contract with two prominent European textile manufacturers. Additionally, Fil Control expanded its reach by establishing a strategic partnership with Media CZ, a well-established textile agent specializing in the Czech Republic market.

**Savio** stated it has been a successful edition with an excellent response from customers and visitors, a high-end showcase of the SAVIO technology and innovations. SAVIO is extremely satisfied and grateful for the excellent feedback from customers and visitors.

**Rieter** celebrated the new partnership with Vinatex which aims to improve the training of textile specialists in Vietnam fostering sustainable growth within the Vietnamese textile industry. Vinatex is one of Vietnam's leading textile companies and a key player in the industry. With a workforce of 80 000 employees, Vinatex operates a diverse portfolio of 45 companies, including 12 spinning mills. Furthermore, Rieter announced a partnership with Recover and Polopiqué. This collaboration of three key players in different stages of the textile supply chain allows the industry to produce yarns with a higher percentage of mechanically recycled fibers.

## Textile Recycling



### Recycling

Complete lines for reclaiming fibre,  
webforming, needling and  
thermobonding

**DiloGroup and Partners**



The VDMA and Deutsche Messe team cheer the awarding of ITMA 2027 to Hannover. The award was also celebrated at the VDMA press conference, at which several member companies such as Oerlikon, Saurer, DORNIER, Thies and Herzog presented their innovative solutions © 2023 TexData International

For the first time, **BB Engineering** (Germany) was an official subexhibitor of its parent company Oerlikon at ITMA Milan – and with success. In addition to man-made fibre spinning (VarioFil® compact spinning line) and fibre-to-fibre recycling (VacuFil® recy-

cling technology), the company focused on introducing its new JeTex® airtextrizing system. In general, BB Engineering assesses the ITMA as very positive and full of opportunities. According to company, the number of visitors and the interest in the topics of synthetic fibre spinning, fibre-tofibre recycling and air-texturizing were continuously high. In addition to many discussions with existing customers and interested parties the medium-sized company recorded a level of incoming orders like never before.

And last but not least, finishing machinery specialist **Monforts** was very pleased to welcome an unexpectedly high number of visitors from Central and South America to its stand and has secured a significant number of major orders from textile manufacturers in this region. Among new orders are those for three Montex stenters delivered to the AustralTex Group in Argentina and a further Montex range to denim manufacturer CIT in Brazil. Guatemala's Global Textiles placed an order for its second Montex stenter, while Mexico's Zentrix ordered its third and Avante, also in Mexico, has opted for its sixth. "Visitor footfall at ITMA 2023 was well beyond the company's expectations, and we were especially pleased at the constant number of visitors from South American companies, as well as from Asia and Europe," said Monforts Marketing Manager Nicole Croonenbroek. "We were able to provide them with detailed information about our portfolio of machines and technologies digitally and fielded an unprecedented number of serious enquiries, many of which promise to turn into new business."

## TOP-LEVEL VISITORS AND DELEGATIONS

The 19th edition of the world's largest textile and garment technology exhibition also drew the participation of several delegations and supporting organisation groups. Among many officials and government representatives, ITMA 2023 hosted high-level country delegations from two of the major textile producing countries, India and Uzbekistan. The delegation from the 6th largest cotton producer in the world was led by President **Shavkat Mirziyoyev** of Uzbekistan, who declared his strong intentions to boost the textile industry in his country.

India was represented by **Smt. Darshana Vikram Jardosh**, Minister of State (Textiles and Railways) of India who led the Confederation of Indian Textile Industry (CITI) business delegation. The delegation comprised 39 top Indian textile and apparel CEOs keen to seize new opportunities by riding on the digitalisation and sustainability wave. Smt. Jardosh said: "ITMA 2023 was an excellent showcase of textile machinery. I am confident that interactions during the fair will further spur investments in the sector and help India achieve Prime Minister Narendra Modi's 5F vision of Farm to Fibre to Factory to Fashion to Foreign vision."

ITMA 2023 also welcomed **Ms Valentina Superti**, Director, European Commission, DG GROW-Internal Market, Industry, Entrepreneurship and SMEs. She gave a presentation at the Impact Financing for Sustainable Transformation forum.

## INNOVATOR XCHANGE

Innovator Xchange is the name for an open forum that is directly integrated into the trade fair. A presentation and learning platform live on the ITMA stage. It provided an excellent platform for visitors to learn about the latest innovations on display at ITMA 2023 and gain insights from industry experts based on four trending topics: Advanced Materials, Automation and Digital Future, Innovative Technologies and Sustainability and Circularity. The Innovator Xchange has attracted a total of 1,174 participants over 5 days.

## ITMA SUSTAINABLE INNOVATION AWARD

After 2019, **Candiani S.p.A.** once again won the ITMA Sustainable Innovation Award. This time for its innovative Candiani Custom project in Milan and nominated by the FK-group. The project consists of a complete micro-factory that produces customized jeans on demand. Customers can choose from a selection of eco-friendly Candiani denim fabrics. Mr Maurer handed over the trophy and said, "CEMATEX launched the ITMA Sustainable Innovation Award in 2015 to encourage and recognise the collaborative efforts of our exhibitors and their customers for the industry excellence category. Today, we are pleased to see another outstanding collaboration, and I would like to congratulate both Candiani and FKgroup for their innovative partnership. As the textile and fashion industry trends toward sustainability and circularity, we hope the Award will inspire more innovative efforts that result in business success, as well as benefit both planet and people."

The two other finalists of the Industry Excellence category are **Denim Moda S.r.l.** nominated by **Jeanologia** for the establishment of the Denim Moda Urban Factory and **Limonta S.p.A.** recognised for the new Bio-FREED dyeing system. An Italian vertically-integrated textile group, Limonta collaborated with ITMA exhibitor, **Navis TubeTex**, and protein biochemicals company **Modern Meadow** on the development of the system.

The ITMA Research & Innovation (R&I) Excellence Award for Master's students of institutions exhibiting in the Research & Innovation sector, serves to encourage academic institutions to embark on research work that contributes to the future of the textile industry, is won by **Mr Philipp Benjamin Weigel** for his thesis: Numerical Simulation of the Structural and Pull-out Behavior of Parametrically Generated Profiled Carbon Polymer Yarns. He was nominated by TU Dresden, Institute of Textile Machinery and High Performance Material Technology (ITM). His thesis was supervised by **Professor Chokri Cherif**.

The first runner up is **Ms Eva Wingerath** (thesis: Life Cycle Assessment and Evaluation of Composite Pressure Vessel End-Of-Life Recycling) and the second runner up is **Ms Maryam Sodagar** (thesis: Banana Fibre as a Sustainable and Renewable Resource for Reinforcement of Poly(lactic Acid)). Both students were nominated by the **ITA** Institut für Textiltechnik of RWTH Aachen University, and supervised by **Professor Thomas Gries**.

## CONCLUDING STATEMENTS BY THE OFFICIALS

**Mr Ernesto Maurer**, President of CEMATEX said: "This edition has been a great success with the visitorship higher than the previous exhibition in 2019. At this ITMA, the transformation journey toward digitalisation and sustainability has taken a huge leap forward. It has been a mega gathering with the presence of stakeholders of the entire textile and garment making ecosystem. CEMATEX associations and their member companies, as well as all other exhibitors, are delighted with the results as the exhibition has surpassed all our expectations."

**Mr Federico Pellegata**, director of ACIMIT, noted: "The results of Milan edition confirmed ITMA as the most important showcase for world textile machinery industry. It was a great success, judging from the quality of visitors in attendance, and many Italian exhibitors have secured contracts and sold their machines."

Summing up the positive response from participants, **Dr Janpeter Horn**, Chairman, VDMA Textile Machinery, said: "ITMA 2023 is one of the few international shows that did not suffer a drop in the number and quality of visitors after the pandemic. This speaks volumes about the brilliance of ITMA! The Milan exhibition has set the benchmark for ITMA 2027 in Hanover. We are eager and confident to continue ITMA's success story 36 years after it has been hosted there."

## ITMA ASIA + CITME SINGAPORE 2025

The show owners of ITMA ASIA + CITME have extended their collaboration to organise the combined textile machinery exhibition in a second Asian location. The combined exhibition has been held biennially in Shanghai since 2008. Show owners - CEMATEX and its Chinese partners comprising China Textile Machinery Association (CTMA) and the Sub-Council of Textile Industry, CCPIT (CCPIT-Text) - have selected Singapore to host the exhibition in 2025. ITMA ASIA + CITME, Singapore 2025 will be held at the Singapore Expo from 28 to 31 October 2025. It will be organised by ITMA Services and co-organised by Beijing Textile Machinery International Exhibition Co. ITMA ASIA + CITME, Singapore 2025 is expected to gross 60,000 square metres. It aims to attract over 700 exhibitors and a visitorship of 30,000.

## ITMA 2027 HANOVER

As with every ITMA opening, where the next ITMA could take place was a hotly debated question. There were rumors about Germany and these also led to Hanover, which was then awarded the contract to the cheers of the VDMA delegation. The Chairman of the Management Board of Deutsche Messe, Dr. Jochen Köckler, had come especially to fly the flag for ITMA 2027 and to see for himself what Hannover would have to achieve in four years' time to be able to outdo a fantastic ITMA 2023. Perhaps a new summer fairytale will succeed under the modified World Cup 2006 motto "A Time to Make Textile Friends".

## CONCLUSION

We have given you a report on ITMA 2023 here, on the atmosphere, the ambience, the technology focus and the many conferences as well as the assessments of visitors and exhibitors. We hope this has given you an understanding of ITMA. However, the truth of ITMA lies in the innovation of the exhibitors. Here, ITMA was able to show that a great deal of ingenuity and effort has been invested in new future technologies that will enable the textile industry to successfully manage its transformation. That is good, that is right and that is important for good business for all those involved in the textile value chain.

[www.texdata.com/itma-2023](http://www.texdata.com/itma-2023)

[www.itma.com](http://www.itma.com)

[www.cematex.org](http://www.cematex.org)

[www.acimit.it](http://www.acimit.it)

[www.vdma.org/textilmaschinen](http://www.vdma.org/textilmaschinen)

[www.swisstextilemachinery.ch](http://www.swisstextilemachinery.ch)

[www.ucmtf.fr](http://www.ucmtf.fr)

[www.btma.org.uk](http://www.btma.org.uk)

[www.group-gtm.nl](http://www.group-gtm.nl)

[www.tmas.se](http://www.tmas.se)

[www.symatex.be](http://www.symatex.be)

[www.amec.es](http://www.amec.es)

[www.vdma.org/itma](http://www.vdma.org/itma)

[solutionsfortextiles.com](http://solutionsfortextiles.com)

[www.green-label.it](http://www.green-label.it)

[en.industryarena.com/vdma-textile-machinery](http://en.industryarena.com/vdma-textile-machinery)

## OERLIKON HIGHLIGHTED RECYCLING SOLUTIONS & NEW PET STAPLE FIBER LINE EVOSTEAM

Oerlikon came to ITMA with the campaign "Oerlikon is the answer" and Vice-President Communication André Wissenberg explained why Oerlikon is this answer to the challenges of our time. He said: "Questions arise for each and every one of us affecting you too and all your business decisions. Do you want to find the answer? Our resources on this planet are limited. Wouldn't you like to be a pioneer using innovative solutions to create a true circular economy? Raw materials can be a valuable resource for your business. Only, what's the best way to efficiently recycle

them? Our oceans, a place of beauty and a miracle of nature, but also a dump containing tons of plastic that will take hundreds of years to decompose. Stop pollution and start using Oerlikon's recycling solutions and help to give raw materials a new life as a carpet, as a jacket, as a t-shirt or much more. There are many questions along the road to a sustainable and successful economy in a world worth living in. Let us know the specific questions challenging your business. And you may find the answer is already here. Oerlikon is the answer. What are the main topics here at the exhibition? What have you experienced in the last couple of days? Sustainability and the transformation of the world. So we are not wrong, no? When

we talk about traceability, new materials, recycling, and all that stuff. And we have the solutions at hand."

### EVOSTEAM PET STAPLE FIBER LINE

Oerlikon presented its innovative new development, the EvoSteam, for manufacturing PET staple fibers, for the first time. Visitors to the Oerlikon trade fair stand were extremely interested in the new, innovative technology. Business discussions were very clearly showing that the new development fulfills the needs of potential clients. The EvoSteam process convinces both in terms of its energy, water and raw material savings and also with regards to lowering operating expenses and the carbon footprint – simultaneously with excellent fiber qualities.

When developing the EvoSteam process, the engineers focused both on fiber quality and in particular also on sustainability, energy efficiency and reducing the consumption of resources. Compared to conventional staple fiber systems, an increase in efficiency of up to 12%, a reduction in production waste of up to 50% along with energy savings of up to 8% speak a very clear language. With water savings of up to 10 million liters per annum and a lowering of the carbon footprint by up to 20%, this Oerlikon system helps fiber manufacturers achieve their sustainability targets. 10 million liters less water: the function of the immersion bath is assumed by a carefully-coordinated set-up comprising godets and pulsed spray nozzles.



The new Oerlikon Barmag ACW WINGS  
© 2023 TexData International

Consequently, moisture is precision-metered and added to the process as required. Completely dispensing with liquid baths generates significant savings in terms of water, energy and spin finish, while simultaneously also increasing occupational safety and cleanliness at the production line.

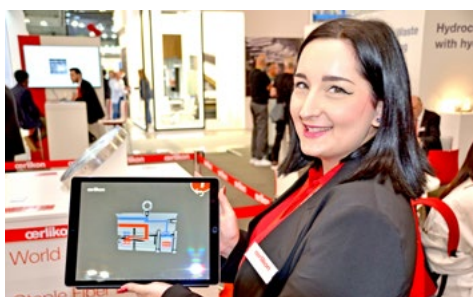
Visitors to the trade fair spoke about a pioneer for more sustainable staple fiber production. "This shows that our customers have understood that the EvoSteam process has tremendous potential and represents a huge step forward", comments Martin Rademacher, Head of Sales Oerlikon Neumag, thrilled by the across-the-board positive trade fair feedback in Milan.



Oerlikon booth at ITMA 2023 © 2023 TexData International

## CIRCULAR ECONOMY AND RECYCLING

In addition, Oerlikon Barmag provided information on technological solutions for rPET that enable customers to save millions of tons of CO<sub>2</sub> per year. In 2022, Oerlikon Barmag introduced a homogenizer recycling plant specifically for customers in China and Asia, where bottle flakes and film waste can be agglomerated, extruded, homogenized and melted to produce polymer melt or chips. It enables the polymer quality of recycled bottles or film waste to be precisely matched to the requirements of various downstream extrusion or injection molding processes. In July, Oerlikon informed that at PT. Kahatex, one of Indonesia's largest manufacturers of woven and circular knitwear, Oerlikon



World premieres at ITMA 2023: the revolutionary new Oerlikon Neumag EvoSteam staple fiber process © 2023 TexData International

Barmag Huitong Engineering's homogenization technology is already in use for the mechanical recycling of processed polyester (PET) waste such as post-industrial waste (popcorn), bottle flakes and film. This key component ensures a uniform homogeneous melt, influences the viscosity increase and thus allows defined rPET precursors to be produced for further processing, such as melt, granulate or fiber material for direct spinning.

Furthermore, Oerlikon is intensively involved in Worn Again Technologies. The British partnership is focusing on a solvent-based recycling technology, with which both end-of-life textiles comprising polyester and polycotton blends and PET plastics can be converted into circular raw materials and fibers (polyester and cellulose). For this, a large demonstration system for upcycling 1,000 tons of textiles per annum is being created in Switzerland. In September, Worn Again announced its chemical recycling plant for textiles is coming alive and presented a short video, which shows the construction progress.

## OERLIKON BARMAG ACW WINGS

Because Oerlikon Barmag technology last for decades, many ACW and WINGS winders are being operated practically side-by-side in some places. Customers asked Oerlikon: please build a WINGS drawing fields over our ACW winders! At ITMA it was shown for the first time at an exhibition in hybrid way – a WINGS drawing field in combination with virtual ACW Winder.

## NEW AIR-TEXTURIZING LINE FOR POY AND FDY

For the first time, BB Engineering was an official subexhibitor of its parent company Oerlikon at ITMA Milan – and with success. JeTex® air texturizing by BB Engineering had its market launch and was impressively demonstrated in the 'Experience Center' of the Oerlikon stand. The new JeTex is a production line for high-quality air-textured yarn (ATY) and combines an innovative texturing system developed by BB Engineering as key component with state-of-the-art components by Oerlikon Barmag to ensure fast production speed, the desired effects, and the quality of the product.

Regarding the proven and popular VarioFil® compact spinning line for synthetic fibres, BB Engineering also brought some innovations to ITMA. Higher production capacities per spinning position and improved spin pack lifetime form a new machine generation with increased productivity.

## PET RECYCLING BY BB ENGINEERING

The VacuFil® PET recycling system was launched at ITMA 2019 in Barcelona. Over the last four years, BB Engineering has been working on further development and this time presented its solution for waste-free production of filament yarns. The patented liquid-state polycondensation (LSP) unit Visco+ for viscosity adjustment and control as key component was the main focus and attracted great interest.

In general, BB Engineering assesses the ITMA as very positive and full of opportunities. The interest in the topics of syn-

thetic fibre spinning, fibre-tofibre recycling and air-texturizing were continuously high and the company recorded a level of incoming orders like never before.



André Wissenberg talking at VDMA press conference © 2023 TexData International

## OERLIKON BARMAG WIPING ROBOT

Oerlikon also used ITMA to provide information on the numerous benefits of its Oerlikon Barmag wiping robots, which can be retrofitted to a wide range of spinning systems. Regular wiping of spinning positions is important for process stability and yarn quality. Automating the process with the wiping robots reduces the yarn breakage rate by up to 30%, improves process stability and reduces downtime. In addition, wiping robots help to indirectly reduce waste as a result of a 90% decrease in the use of silicone oil spray cans and a 15% to 20% decrease in total silicone oil consumption.

André Wissenberg told us that despite a very difficult business situation at the moment, they were able to have very good discussions with their customers at ITMA.

[WWW.OERLIKON.COM/POLYMER-PROCESSING](http://WWW.OERLIKON.COM/POLYMER-PROCESSING)

## TRÜTZSCHLER MAN-MADE FIBERS PRESENTED LATEST OPTIMA

Trützschler Man-Made-Fibers presented OPTIMA, its Man-Made Fibers solution that can be flexibly adapted and customized to implement the unique extrusion and spinning process of the individual customer.

OPTIMA for BCF was launched in 2019, and dozens of spinning positions are now running smoothly worldwide. With the four-end MO40 systems for monocolour BCF yarns and the TO40 extrusion system for tricolor yarns, Trützschler offers solutions with a symmetrical yarn path for optimum yarn quality. Customers benefit from outstanding productivity, lower production costs and stable processes.



OPTIMA presentation © 2023 TexData International

The OPTIMA for Industrial Yarn (IDY) variant transfers these advantages to the production of industrial and technical yarn. The TEC systems enable the efficient manufacturing of high-tenacity, low-shrinkage, high-count and semi-industrial filament yarns. The outstanding yarn and bobbin qualities even meet the demands of the automotive industry. Applications range from tire reinforcements, airbags and belts to geotextiles, ropes, tents and travel luggage.

### NEW: MO60 – THE SOLUTION FOR “LOW DENIER” BCF YARNS

Increasing the throughput of BCF production by 50% is no problem with the new 6-end OPTIMA variant MO60 for low denier carpet yarn applications. One position simultaneously extrudes and spins 6 filament bundles with 6 individual spin packs and produces 6 bobbins on two 3-end winders. Proven components such as the rectangular spin packs, the flow-optimized quenching system, the DSP double-shell godets and the HPC texturing system guarantee highest yarn qualities. MO60 is also designed in such a way that the yarn runs straight without being deflected. Each filament bundle is treated exactly the same, resulting in excellent dyeing uniformity. The unique 6-end process reduces fixed and variable conversion costs by almost 50% compared to a 3-end and almost a third compared to a 4-end extrusion and spinning process.

[www.truetzschler.com](http://www.truetzschler.com)

## RETECH PRESENTED IOT APPLIED IN A HEATED GODET AND MORE INNOVATIONS

Retech, as expert in 'drawing your fibres to perfection', presented various interesting innovations under the blue thread theme and related to sustainability for heated godets. Retech offers unique designs that provide better control over temperature, fiber treatment and sustainability. Furthermore, Retech also focuses on the energy efficiency of motors and heaters.

In its 11th participation in an ITMA, Retech highlighted IoT applied in a heated godet. The developers have successfully implemented IoT into the heated godet. Therefore, it's possible to supervise the induction heater and the bearing temperatures. These controls allow to achieve a tremendously increased lifetime of the components. The Retech experts explained and showed on a demonstration unit the immediate effects of vibrations and other negative temperature-related effects.

Furthermore Retech presented a new drive concept for slow and super-slow speeds as well as a special machine construction of drawing systems.

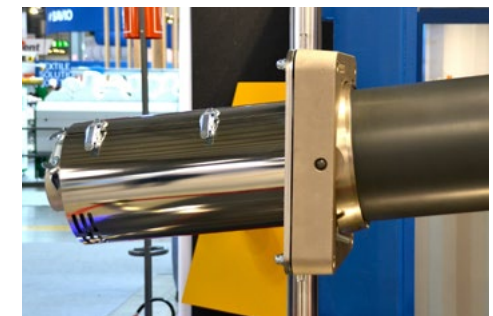
"It was an intensive time packed with many interesting discussions," said Ralph von Arx, CEO at Retech Aktiengesellschaft. The company for high-quality equipment established in synthetic filament produc-

tion was glad to meet its customers and made a big number of new contacts. "We are optimistic to realize the interesting projects that were shared with us. It's now that the real work starts!" The most attention gained the displayed godet applying IoT. "The feedback proved that our developments are going in the right direction and that IoT is considered an important additional feature. We believe that IoT for godets will become a future standard for high-end applications," told us Ralph von Arx.

[www.retech.ch](http://www.retech.ch)



Retech demonstration unit © 2023 TexData International



Retech heated godet © 2023 TexData International

## SSM SHOWED THREE NEW STATE-OF-THE-ART WINDERS

SSM launched the third generation of the renowned sewing thread finish winder Thread King. The perfect combination of efficiency and sustainability offers considerable added value for customers. Contributing factors are the shorter production cycle, easier yarn thread-up, reduced machine footprint and lower power consumption. With speeds up to 15 000 rpm and a patented tuck-in system, the machine offers a shorter production cycle and the shortest doffing cycle on the market. It also features an increased supply tube quantity as well as an improved length accuracy, resulting in higher profitability and up to 50% safety margin reduction on wound packages. Like its predecessor, the TK3 is



SSM NEO-FW / -FD winder © 2023 TexData International

available in two versions: TK3-CT for cones handling and TK3-KT for king spools

### SSM NEO-FW / -FD WINDER

The new SSM NEO-FW precision winder offers outstanding advantages. It offers a 25% increase in speed, automatic doffer and guarantees a quick take-up change. It also features Digitens yarn tension control, the fastflex electronic yarn laying unit and the advanced winding algorithm DIGICONE 2. In addition, it has the new "Nema ready" feature. The SSM NEO-FD precision assembly winder, offers the same features as the new SSM NEO-FW and has an integrated 2-or 3-ply creel.

[WWW.SSM.CH](http://WWW.SSM.CH)

## DIENES MULTIMODE INNOVATIONS

Dienes, who describe themselves as a partner for machine components for the synthetic fiber production as well as textile special applications, showed the latest developments to its MultiMode system. They offer laboratory machines, pilot plants and small production lines. All of the lines are built in a modular way, which gives very high flexibility. Thanks to the DIENES control system, which was presented, the rearrangement of the lines is done automatically.



DIENES Head of Sales Jose Canga Rodriguez presented the MultiMode © 2023 TexData International

The system recognizes which modules are connected to the line and the operator is always able to operate the line regardless which modules are connected, without any programming or anything. The system covers wet spinning, or solution-based spinning, melt spinning, and also electric spinning. In wet spinning, DIENES can cover the whole process from precursor spinning, up to the carbon fiber. Other fields are bio-based polymers like PLA, medical applications or Aramid. It is a flexible system in which customers can maybe use 80% of the modules for a new process.

[WWW.DIENES.NET](http://WWW.DIENES.NET)



Heberlein Air Interlacing Jets and Air Texturing Jets presented at ITMA 2023 © 2023 TexData International

## HEBERLEIN - 5 FOR FILAMENT

The core competence of Heberlein, world market leader from Switzerland, lies in the development and production of highly specialized key components for the modification and treatment of synthetic yarns, especially filament yarns. New technologies open up fascinating possibilities here and Heberlein presented no less than five new products at ITMA 2023: the APe142 from the "Advanced Performance" DTY jet inserts "AP" series, the HemaJet LB06, the Lufan-4 Nano, the AirSplicer-3 Flex and FDY-JET-SP.

AIR SPLICER-3 FLEX covers an exceptionally large count range when splicing textile and technical multifilament yarns. Lufan-4 Nano is for threading yarn in texturing (ATY, DTY) and air covering machines. The maximum total count is 3000 dtex. FDY-JET-SP is a cost-effective interlacing jet for an application range up to max. 190 dtex.

[WWW.HEBERLEIN.COM](http://WWW.HEBERLEIN.COM)



The new Trützschler intelligent card TC 30i © 2023 TexData International

### TRÜTZSCHLER SPINNING - SHOWED FANTASTIC NEW MACHINES FOR SPINNING PREPARATION

Trützschler showcased on a 1320-square-meter stand innovations for carding, draw frame and combing which meet the most important customer requirements in fiber processing: higher efficiency, more sustainable raw material utilization and intelligent automation – while also displaying the potential of digital technologies for spinning mills. Furthermore, they introduced the new brand TRUECYCLED for textile recycling.

#### TC 30i: THE NEW BENCHMARK IN CARDING

The new Trützschler card TC 30i delivers best quality from any raw material, thanks to an expanded cylinder diameter and higher number of active flats. This leads to a significantly increased carding length. In combination with the intelligent T-GO gap optimizer, which ensures the right carding gap setting precisely and automatically, the best possible yarn quality is achieved. The TC 30i also includes a new suction system that cuts costs and boosts sustainability because it separates higher value card waste from the remain-

ing waste. This valuable material can be turned into additional revenue.

Most spinners already know the big advantages of the Trützschler T-GO gap optimizer, Trützschler has introduced with the TC 19i at ITMA Barcelona. Now, it is becoming even more effective because of the structural changes in the TC 30i card. Fibers stay in the carding gap for longer because the number of active flats is increased, and this leads to higher levels of performance and quality. And in combination with the enhanced T-CON system, it is now possible to predict and monitor the carding gap with increased precision.

Alongside intelligent features like T-GO and WASTECONTROL, the innovative TC 30i also comes with T-LED, SMART TOUCH and RFID. This makes the machine easy to adjust and operate. The new design also places a strong focus on accessibility. As a result, all maintenance positions are still easily accessible – including the licker-in, flats and doffer. This means the redesigned setup makes life easier for the technicians maintaining the machine. Trützschler offers the perfect solution for spinning a wide range of materials. Our TC 30i is available for fine cotton (the TC 30 Fi), for man-made fibers (the TC 30 Si) and for recycling (the TC 30 Ri). Whatever your specific needs, the innovative TC 30i is the next-generation card with the power to help your company grab a competitive advantage by achieving outstanding levels of quality, productivity and sustainability.



View into the card TC 30i  
© 2023 TexData International

#### TCO 21XL: 12 HEADS BOOST PRODUCTION

Another Trützschler highlight was the high-performance comber TCO 21XL with 12 combing heads. For many decades, eight combing heads has been considered state-of-the-art in the spinning industry. Now, Trützschler's advanced technology and engineering proves that it is possible to build a heavy-duty comber that maximizes productivity by 50 % and saves space – without compromising on quality. Increasing the number of combing heads by 50 % makes it possible to increase productivity by 50 %, enabling rates of up to 150 kg/h. As a result, two



The new Trützschler comber TCO 21XL  
© 2023 TexData International

TCO 21XL combers offer the same production capacity as three conventional combers. The 50% increase in productivity can be even higher when the machine is operated with JUMBO cans, which, with a diameter of 1200 mm, can easily accommodate the additional output of the TCO 21XL. The new TCO 21XL comber offers huge advantages when it comes to saving space, as 25% less floor space is required for the same number of combing heads. This reduces the initial construction costs and at the same time the operating costs for lighting, air conditioning and other overheads. In addition Trützschler has reinvented the tried-and-tested monitoring system by adding the unique ONLINE NOIL MONITORING function TCO 21XL. This means the COUNT CONTROL and ONLINE NOIL MONITORING functions are now working together to give customers full control over the combing process and the final yarn quality. Variations in the noil are detected automatically and operators receive a warning if a significant change occurs.



The further developed Trützschler IDF3 with Jumbo cans © 2023 TexData International

The basis of the progress to be able to build a comber with 12 heads is the double-sided drive concept of DUAL DRIVE and 2TWIN DRIVE. This ensures the synchronous movement of all machine parts over the entire enlarged shaft length. During the combing process, high-precision movements are essential to achieve high sliver quality. Conventional combers offer only single-sided drives, which result in higher shaft torsion across the machine width.

### IDF 3 – THE SHORTEST PATH TO PERFECT QUALITY

The third major Trützschler innovation was a complete modernization of the IDF3. Trützschler's engineering experts wanted to turbo-charge the IDF by adding components and features from other areas of the draw frame portfolio, including the popular TD 10 self-regulating draw frame. First, the team adapted the precise, robust measuring devices DISC LEVELLER and DISC MONITOR to fit the specifications of card and IDF 3. The resulting IDF DL and IDF DM interact perfectly with the existing 1-zone drafting system, which results in more homogeneous slivers and higher yarn quality. Switching to the IDF DL and IDF DM system instead of the previous measuring funnel adds more benefits than advanced detection of sliver deviations. The new system also works entirely without compressed air, which reduces operating costs. In addition, the IDF 3 make-over includes a complete redesign of the drafting zone in line with all Trützschler drafting systems.

This further stabilizes the drafting process and significantly improves the yarn imperfection total IPI for recycled fibers and draw cotton, while also blending with synthetics. Yarn strength and elongation are also improved. To make it round, the teams have optimized the can changer to save the customers valuable time. The delivery speed of the IDF 3 stays at the high level of 300 m/min during can changes, which increases efficiency by 3 %. Trützschler says the third generation of IDF proves that customers really can have it all.



Examples for TRUECYCLED processes © 2023 TexData International



Balkan tearing machine © 2023 TexData International

### TRUECYCLED

TRUECYCLED stands for state-of-the-art recycling installations from Trützschler. These processes enable manufacturers to achieve a high-quality end-product from textile hard waste. With TRUECYCLED, manufacturers can rest assured they use the best technology and a reliable and reproducible manufacturing process – the pre-requisite for high quality yarn made from hard textile waste. For TRUECYCLED, Trützschler presented the individual recycling processes as well as the materials of the different production stages. At the center of the presentation was a tearing machine from Balkan Textile Machinery, with whom Trützschler announced a cooperation at the trade fair in order to be able to offer a complete closed loop process for the production of recycled yarns. Balkan is a firmly established family business in Turkey that shares Trützschler values and for whom sustainability in the textile chain is also an important concern. Their robust and reliable machines help cut, mix and tear textile waste into individual fibers and press these fibers into bales of secondary fibers. These bales can be fed to the preparation process with Trützschler machines.

**TRÜTZSCHLER CARD CLOTHING (TCC)** presented a wide range of technologies, especially the new MT/PT 45R. Therefore they have combined the strength of MT/PT 40 and the cleaning power of MT/PT 45. The MT/PT 45R is the new flat top for recycled materials. The right combination of flat top and cylinder wire is the key for yarn quality.

[WWW.TRUTZSCHLER.COM](http://WWW.TRUTZSCHLER.COM)

## SAURER PRESENTED SOLUTIONS FOR THE TEXTILE FUTURE

Saurer presented a wide range of new solutions at ITMA that addressed the future topics of automation, digitalization and recycling to a high degree. The motto "Shaping the future of textiles" was thus impressively underpinned. Saurer has set itself the goal of providing its customers with comprehensive support on the road to a circular economy, and this plan clearly took shape at ITMA. To this end, Saurer presented both technology and machines as well as many applications that underscored the quality of implementation.



Saurer presented a variety of yarns and fabrics spun from different materials and also recycled materials © 2023 TexData International



Autoairo air-spinning machine with autonomous spinning positions © 2023 TexData International

### NEW AUTOCORO 11

The new, fully automatic Autocoro 11 rotor-spinning machine is the 4th generation of Autocoro with individual drive technology, which is already operating reliably with more than 1 million positions worldwide. With the Recycling Xtreme (rX edition), the new Autocoro 11 rotor spinning machine is tailor-made for recycled fibres. The new patented rX yarn guides in the winding head have been developed specifically for recycled fibres. They are dirt resistant and self-cleaning. With rX yarn guides, productivity can be increased, maintenance costs can be drastically reduced and package quality can be improved. The new SE 21 spin box supports the processing of recycled fibres with dirt-repellent surfaces in the area of the opening rollers and with exchangeable fibre beard supports provided with a patented quick-change system. Depending on the nature of the raw material, both can be replaced during production without tools, saving time. Furthermore, Saurer offers a new, patented rotor cleaning technology for the Autocoro 11, where the cleaning processes are digitally controlled



A real highlight was the Saurer automation solution Autospeed in combination with Roweclean and Rowestore © 2023 TexData International



The new Autocoro 11 rotor-spinning machine for producing yarns from recycled fibres © 2023 TexData International

using the latest linear motor technology. Deposits in the rotor have no chance of remaining in the rotor groove because the R&D engineers have added a new movement mode for the cleaning scraper and an additional circuit. The extremely precise positioning of the scraper in the rotor groove further increases cleaning efficiency. The new extraction system in the area of the spin boxes is particularly efficient in eliminating waste. And thanks to a new multichamber system, the waste is precisely separated, allowing it to be reused and contributing to a more circular economy.

### RENEWCELL CIRCULOSE®

Saurer demonstrated the spinning of Circulose® on 3 different end spinning systems. Circulose is a fibre made from 100% textile waste by Renewcell.

### AUTOCARD SC7

On the new Autocard SC7, all revolving flats gauges can be adjusted automatically to facilitate the processing of recycled fibres. In addition, the carding area has been increased to over 4m<sup>2</sup>, which allows gentle processing of all fiber types and leads to increased productivity. Other features include droppings detection and pneumatic assisted piecing for easy processing of recycled fibres.

### AUTOAIRO CONVINCES CUSTOMERS

The Autoairo air-spinning machine offers flexibility in processing different fibres: cotton, polyester, viscose as well as new chemically regenerated fibres and delivers cylindrical or conical bobbins. Saurer Belairo yarns uses less energy and production space, which means less building and air conditioning costs. Saurer has combined

this resource-saving spinning technology with the most advanced automation solutions in this segment. Thanks to digital control of the autonomous spinning positions and new smart features, yarn quality is guaranteed and not dependent on staff availability.

### NEW COMPACT YARN SYSTEM

The ZI 72XL compact-spinning machine offers a high degree of flexibility and is suitable for recycling fibres with the new compact yarn system Impact FX pro. The automation features in ringspinning were automatic roving transport from the Autospeed roving frame, automatic doffing and the new Autospin automatic piecing robot. The ZI 451 worsted compact-spinning machine was spinning finest for woolen yarn and the ZI 51 manual ring-spinning machine is delivering perfect yarn quality as well.

### MUCH NEW TWISTING TECHNOLOGY

Saurer Twisting Solutions presented the latest developments in twisting and cabling with the exhibited machines CompactTwister, CarpetCabler/CarpetTwister 1.12, TechnoCorder TC2 Plus, CakeFormingWinder and Robot AGV.

CompactTwister impressed with new standards in twisted yarn quality, flexibility, energy consumption, robustness, reduced space requirement and ease of maintenance. CarpetTwister 1.12 / CarpetCabler 1.12 convinced with an enhanced servo drive technology and data management to reliably and confidently mastering un-

usual requirements of an ever-changing market. TechnoCorder TC2 offers now the following innovative machine features and options: PreciWinding (TC2 Plus), oiling device, balloon limiter ring and QualityGuard. The CakeFormingWinder amazed with the new rotor technology and the integration of a high-speed traversing collet system.

### AUTOMATION GOES AHEAD

Saurer has a long experience in automation, starting from the bobbin transport systems from roving to ring-spinning. Recent innovations include AGVs like Can AGV for can exchange in spinning and Robot AGV for ergonomic handling of heavy twisting bobbins. Saurer introduced at the ITMA the Autospin automatic piecing robot for ring-spinning.

Highlight of the Texparts presentation was the energy saving Eshape spindle combined with Spinnfinity zero underwinding system, which enables a significant reduction of maintenance and cleaning operation.

### SHAPING THE FUTURE OF TEXTILES

Saurer's exhibition motto was: "Shaping the future of textiles". By anticipating the megatrends of sustainability, energy saving, automation, and digitalisation, Saurer offered a range of products meeting the customers' needs. The latest innovations presented at the show gained a lot of interest, Saurer announced.

[WWW.SAURER.COM](http://WWW.SAURER.COM)

## USTER PRESENTED SEVERAL INNOVATIONS FOR IMPROVING QUALITY

Uster Technologies introduced its pioneering solution suite, Uster 360Q. It smoothly combines three key elements: cutting-edge instruments, integrated software with data analytics, and unrivaled textile expertise from Uster's acknowledged specialists which empower mills to lift quality and profitability to the next level. With this combination, textile mills can completely embody the philosophy of 'managing a mill with quality in mind'. Going beyond customer benefits, the 360Q platform enables cooperation with industry-leading companies for best-in-class solutions. FiberQ Lot and FiberQ Bale are the software elements of 360Q for raw material utilization. They support spinners' daily processes, eventually resulting in better quality consistency, profitability and further growth. Uster 360Q supports spinners in sustainable data-driven decisions for raw material management. Combining Uster HVI 1000 with powerful software, analysis of fiber data is the start point. Uster textile experts then bring the capabilities of equipment, data and software tools into the specific mill context.

### USTER FABRIQ ASSISTANT

The new Uster FABRIQ ASSISTANT is a central platform for automated processing, analyzing, and visualizing quality data from Uster fabric inspection systems. Its

three value modules – AI Classification, Quality Reporting and Central Management – give fabric producers the whole story for quality, saving time and driving operational excellence. Uster's latest innovation in the field of fabric inspection is an online tool giving a user-friendly summary of quality performance data from every fabric roll inspected in the mill. A range of statistical analysis tools highlight key info through various charts, histograms or trend diagrams. With the new Uster FABRIQ ASSISTANT, there is no need to toil over manual data. It's all automated, so decision-making is simpler and much faster for fabric manufacturers.

[WWW.USTER.COM](http://WWW.USTER.COM)



For highest demands on consistent quality: Q360 and Fabriq Assistant from Uster © 2023 TexData International

## RIETER PRESENTED NEW AIR-JET SPINNING MACHINE J70 & MORE

The highlight of the Rieter booth was of course the new air-jet spinning machine J 70. It enables spinning mills to achieve an unprecedented low level of production costs per kilogram of yarn, coupled with high flexibility and reliability. During a launch ceremony, Roger Albrecht, Head of Rieter Spinning Systems, presented the new J70 to the audience. He said: "The J70 is a benchmark in terms of the lowest energy consumption. Compared to its predecessor, energy consumption was further reduced by using even more energy efficient drives. Air consumption was reduced further with the new technology called CO-MAX. And Rieter CEO Thomas Oetterli aided: "It's big, it's fast, it has high quality and it has a high reliability. I think we really truly believe in the potential of this machine. Now, it's time to invest."

### ROBOSPIN

The industry's first fully automated piecing robot, is now also available for compact-spinning machines.



The new Rieter CEO Thomas Oetterli on the big ITMA stage © 2023 TexData International

### ESSENTIALOPTIMIZE

The new module of the Rieter Digital Spinning Suite brings the digital technologist into the spinning mill. It links data from the individual machines and increases efficiency.

### NEW DRAW FRAMES

Rieter has launched a completely new generation of draw frames: the single-head autoleveler draw frame RSB-D 55 and the SB-D 55 without autoleveler as well as the doublehead autoleveler draw frame RSB-D 27 and the SB-D 27 without autoleveler. They all stand for perfect sliver quality at production speeds of up to 1 200 m/min.

### NEW CARD C 81

The new card C 81 gives spinning mills a strong position in the market. Intelligent sensors make this possible by setting the carding gap to the ideal size and monitoring the contaminant content in real time.

### RECYCLING

Rieter presented Com4recycling, the system that enables customers to produce fine, high-quality ring and compact yarns from challenging raw material.

[WWW.RIETER.COM](http://WWW.RIETER.COM)



The new air-jet spinning machine J 70 © 2023 TexData International

## SUPERGRINDER PRO FROM BRÄCKER

Bräcker presented the supergrinder pro, a fully automated single-axis grinding machine, which can simultaneously load, check, grind, unload, and sort cots within less than seven seconds. This is made possible thanks to its unique design with an automated tool turret. With a production output of 520 rollers per hour, supergrinder pro is a must for any spinning mill, Rieter xx told us. The supergrinder pro does not only offer very high performance on the market for single-axis grinding machines; thanks to an avant-garde design, it also has fewer moving parts, resulting in less maintenance and energy costs. The machine is less bulky than others in its category so it can meet smaller space requirements. The supergrinder pro



Fritz Moser, Senior Sales Manager at Bräcker, introduced the supergrinder pro to us © 2023 TexData International

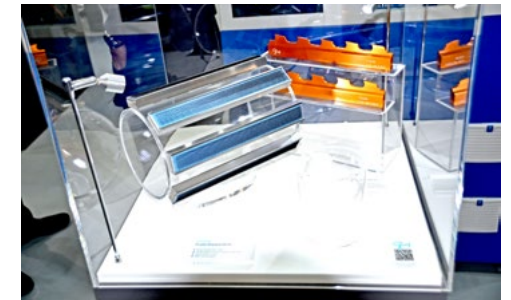
has been developed with performance, energy usage and maintenance costs in mind. An automatic turret tool is at the center of this innovative design. It allows to perform the complete grinding cycle in less than seven seconds only. The machine can process any axle geometry which eliminates the need for manual adjustment.

[WWW.BRACKER.CH](http://WWW.BRACKER.CH)

## GRAF PROCLAIMED GAMECHANGER

Graf showed game-changing novelties which are designed to boost productivity, yield and sustainability while reducing conversion costs. Among other products there were two flexible tops, HYPERTOP and EasyTop, the carding wire TUCAN, two circular combs, Ri-Q-Comb flex and INOACOMB flex and the service machine DAM 35 flex flat. With its patented multi-zone setting pattern and optimized tooth geometry, HYPERTOP offers unparalleled good fiber savings of up to 0.5% while ensuring constant and optimal yarn IPI values. EasyTop increases quality and saves time. The innovative magnetic adhesion technology reduces downtime by 30% during reclothing of aluminum flat bars. TUCAN metallic card clothing has been specially designed to handle up to 1'100 tons of material without any grinding required. Ri-Q-Comb comes with optimized and consistent IPI values customers can rely on. And the 2-in-1 stripping and clipping machine for flexible flats delivers a precise and stable carding gap and allows a fast changeover.

[WWW.GRAF-COMPANIES.COM](http://WWW.GRAF-COMPANIES.COM)



Graf innovations TUCAN and HYPERTOP © 2023 TexData International

## SÜSSEN COMPACTING DEVICES

Süssen presented the compacting devices COMPACTeasy and EliTe. COMPACTeasy is the mechanical compacting solution and stands for low investment cost. EliTe stands for high productivity and optimum and consistent yarn quality with low operating costs.

[www.suessen.com](http://www.suessen.com)



TEMCO Greendisc - a sustainable disc solution  
© 2023 TexData International

## TEMCO GREENDISC

Temco presented GreenDisc, the sustainable disc for DTY processes. The GreenDisc meets customer demands for highest quality standards in texturing in an environmentally responsible manner by featuring an innovative detachable carrier, which is fully circular and a recyclable polyurethane ring. The GreenDisc consists of a two-part, dismountable carrier and a polyurethane ring (PU ring). Thanks to a snapin connection, the two parts of the carrier can be fastened around the PU ring and separated again after usage and recycled. The new design offers the same maximum speed and high yarn quality as any other Temco discs.

[WWW.TEMCO.COM](http://WWW.TEMCO.COM)

## REINERS + FÜRST SAYS NO VARIANCE

Reiners + Fürst presented a wide range of its spinning rings and ring travellers that meet the highest quality requirements. All of them offer a top price-performance ratio and are manufactured in Germany. Production manager Jürgen Smekal told us that since the last ITMA, the main focus has been on evolutionary development. It is an ongoing goal that all rings from production always have exactly the same properties, so variance should be almost eliminated and tolerances further minimized. There has been further progress here.



R+F rings in a showcase © 2023 TexData International

Overall, R+F offers an appropriate solution for all challenges in spinning. Nevertheless, it is of course also necessary to develop new things. And there was also this highlight. R+F has developed a new traveller coating in the short staple spinning sector called "Matrix". This is the first coating to be assembled from different processes one after the other. This is done to get a traveller that is not only particularly wear resistant, but can also be used without reduced speed. Thus, the machine can immediately reach normal production speed.

[WWW.REINERSFUERST.DE](http://WWW.REINERSFUERST.DE)

## MARZOLI'S NEW ROVING FRAME

Marzoli's focus was on the new FTM320, a roving frame with headstock in middle position and independent double side modules that works simultaneously. The single revolver exchanger for both sides, coupled with an innovative patented scheme of trains in creel, allows to get an optimized transport layout and an easier maintenance. The headstock with HMI, MRE and the OHTC parking all placed in the middle allows an easy view of the whole machine and guarantee a simple management. The key points of the FTM 320 are superior technology with increased work efficiency to ensure top quality roving. Plus doffing optimization & outstanding productivity with lower investment and operating costs resulting in a quick return on investment. It allows spinners to increase efficiency by up to 5%. Marzoli also showed the CMX, its state-of-the-art combing machine with 10 combing heads, and the MDS2 ring frame with Active Flute energy-saving system.

[EN.MARZOLI.CAMOZZI.COM](http://EN.MARZOLI.CAMOZZI.COM)



Marzoli Marketing Specialist Ilaria Scalvini in front of the new FTM320 © 2023 TexData International

## LOEPFE PRISMA AUTOCLEARING

Loepfe's highlight at ITMA was the newly launched YarnMaster® PRISMA Autoclearing, representing a perfect solution for easy handling of yarn cleaning. Time and resources are saved while efficiency and quality remain stable at the highest level.



The Loepfe booth under the sign of Prisma  
© 2023 TexData International

The latest PRISMA software update 2023-H1 includes the new Autostart function and improved Autoclearing. Furthermore, visitors were also able to test the full functionality of the associated MillMaster® TOP data system. And Loepfe showed how its sensors keep yarn producers ahead of the competition by showcasing impressive achievements from Loepfe users in the Textile Corner.

[WWW.LOEPFE.COM](http://WWW.LOEPFE.COM)



High interest for Muratec FLCone  
© 2023 TexData International

## MURATEC AUTOMATIC WINDER ALCONE

Murata Machinery Ltd. from Japan unveiled its new automatic winder PROCESS CONER "Alcone". The new machine pursues further user-friendliness while maintaining the high productivity and labor-saving features inherited from the "No.21C PROCESS CONER" and "PROCESS CONER II QPRO" series. Alcone combines the technology and know-how Murata has cultivated for more than 70 years, in a constant effort to maximise machine production, and minimise energy and labour costs. In addition, Murata presented another automatic winder, the "FLcone" to get feedback from their customers for this product of the future. According to Murata, "FLcone" is also a pilot to approach the winder process in a completely new perspective and thus to change it in a sustainable way. At this ITMA, the "FLcone" was exhibited only as a reference object, but Murata believes it will be a machine that will rewrite the standard of the industry. Furthermore, the "Vortex 870 EX" spinning machine has been presented.

[WWW.MURATEC.NET](http://WWW.MURATEC.NET)

## NSC WITH SERVO MOTORS

NSC, the global specialist in textile machinery for processing long staple fibers, exhibited 3 machines from their portfolio of 50 machines. All machines featured groundbreaking advancements over their predecessors. For example, the ERA50 comber came with a new drive, a 9 axis servomotor drive execution. Thanks to this multi-motor drive, most of the settings will be possible through the main control screen. Quantities of different materials have been tried on this new ERA combing machine and results are promising for delicate material which has to be processed in a gentle way. Two machines were sold during the show and more machines will follow after the show. The GC50 chain gill benefits from additional axes driven by servomotors which allows more settings on the main control screen. Contracts have been signed for European customers for this new generation of chain gills. In addition, NSC has introduced a new flyer frame BM21 with a new electronic platform. With its easy adjustments and maintenance, the flyer rover is highly competitive in its specific field.

[WWW.NSC-SCHLUMBERGER.COM](http://WWW.NSC-SCHLUMBERGER.COM)



NSC for long staple fibers © 2023 TexData International

## FADIS LEO ROBOT FOR SPOOLING

Fadis from Italy, a leader in winding and spooling machines, presented no less than 15 machines at their home event, including many new machines and advancements. The absolute highlight of their exhibition was the Leo Robot, a robot-assisted, fully automatic spooling machine. The innovative automation solution, developed together with customers and partners, allows loading and unloading of packages of different sizes and types of the tubes. This enables the machine to work autonomously while maintaining good results and thus outstanding efficiency. Furthermore, Fadis showed a further development of its air texturing machine. Thanks to the "open platform" concept, the machine can be configured with 2 to 4 cold godets or 6 hot godets to produce air textured yarns in perfect quality, starting from POY/FDY /FOY/SDY. And with the new SINCRO PLUS, Fadis presented a new concept of an electronic yarn-guided precision winding platform.

[WWW.FADIS.IT](http://WWW.FADIS.IT)



The new Fadis Leo Robot always attracted a lot of attention from visitors © 2023 TexData International



Bobbin change with the robot for the Twinstar II  
© 2023 TexData International

## SAHM NEXT LEVEL WINDING

The German Georg Sahn, manufacturer of precision winding machines as well as peripheral systems, showed their automatic precision cross winder Twinstar II with numerous further developments under the motto "Sahm Winding Solutions - The Next Level". The machine can be used as a take-up winder, assembly winder and also as a direct spinning winder. New features of the Twinstar II include the flexible traverse, which gives customers full adjustability for traverse width, bobbin shape, bobbin positioning and choice of yarn reserve as well as the Smart View monitoring application to track the production of each winder. The absolute eye catcher at the booth was the robot support for bobbin change, which was demonstrated live. SAHM offers scalable automation solutions for TWINSTAR II winder lines ranging from an Easy Storage Doffer for single winding positions to AGV fleet integration with robotic options and temporary bobbin storage for lines with several winding positions.

[WWW.SAHMWINDER.DE](http://WWW.SAHMWINDER.DE)



SAVIO PROXIMA Smartconer® © 2023 Savio

## SAVIO INTRODUCED NEW MACHINES FOR WINDING & AIR-JET SPINNING

Savio from Italy, member of the Vandewiele Group, launched two new machines for winding and air-jet spinning: Proxima Smartconer® and Lybra Smartspinner®. These two machines are the result of the commitment of Savio R&D team in the last 4 years. It testifies Savio's dedication to innovation technology and strong partnerships across the industry. Savio told us, it has been a successful edition with an excellent response from customers and visitors, a high-end showcase of the SAVIO technology and innovations. SAVIO is extremely satisfied and grateful for the excellent feedback from customers and visitors.

### PROXIMA SMARTCONER®

The new winding machine Proxima Smartconer® is setting the benchmark in Savio automatic winding. Savio has combined the name Proxima with Smartconer®: it stands for a high-tech winding machine, capable of perfectly adapting to demands of Connectivity, Industry 4.0 and Industrial Internet of Things. Thanks to the innovations, spinners will get a machine featuring high-tech capabilities, thanks to a design with a strong focus on the main benefits for customer's competitive advantage: high productivity, low energy consumption, premium yarn quality, automation, and data connectivity.

### LYBRA SMARTSPINNER®

Savio's new air-jet spinning machine Lybra Smartspinner® has been developed with an original spinning technology to serve the customers in specific applications of textile production: knitting, home textiles, sunshades. Air-jet spun yarn has a soft and smooth character, perfectly adapting to creating functional & fashionable fabrics. With LYBRA Smartspinner®, SAVIO wants to offer its customer a versatile, flexible, cost saving and easy-to-use machine. Air-jet spinning offers to yarn manufacturers the opportunity to produce yarn at high production rates and low processing costs. One important technology of LYBRA Smartspinner® is the MULTI BLEND SYSTEM. This onboarding system allows to use two separate slivers, instead of a pre-blended one, directly fed into the spinning unit; inside the spinning chamber, the fibres are mixed together producing a final yarn of same aspect and features as the standard one. Moreover, the system can modify the composition of the blend directly from the machine PC, without changing the feeding slivers. This allows a reduction in production costs and an optimization of the preparation lines. They can obtain different material blends but also different colour mixtures.

Furthermore, Savio had dedicated an area of the booth to display the samples, cloths, garments, knits produced with yarns spun by Savio machines. It was possible to touch & feel first-hand the quality of the yarns that customers and partners made into fine creations. Savio also uses ITMA for its Golden



SAVIO LYBRA Smartspinner® © 2023 Savio



SAVIO LYBRA Smartspinner® © 2023 Savio



SAVIO PROXIMA © 2023 Savio

Drum ceremonies to reward its customers for their loyalty and cooperation. Mr. Ricardo Steinbruch from Vicunha Têxtil was awarded with a Golden Twinsplicer®.

[WWW.SAVIOTECHNOLOGIES.COM](http://WWW.SAVIOTECHNOLOGIES.COM)



The brand new DORNIER A2 air-jet weaving machine © 2023 TexData International

## DORNIER INTRODUCED NEW AIRJET WEAVING MACHINE A2

Weaving machine manufacturer DORNIER from Germany offered a clear booth concept and, in addition to its star product, the P2 rapier weaving machine, showed the brand new A2 air-jet weaving machine, successor to the well-known A1. DORNIER calls the new A2 a multi-talent, because it offers innovative solutions for all challenges of weaving, today and tomorrow. Built on the proven technology of the DORNIER system family, the A2 convinces with a future-proof control and powerful concepts. Whether operating with a simple cam motion, in combination with a Jacquard head with a high number of hooks, a dobby machine or with the DORNIER EasyLeno® motion – the A2 is the perfect tool for the creative, economical and precise production of a wide range of different textiles.

It is available in machine widths ranging from 150 up to 540 cm. A multitude of patented components such as DORNIER PIC System, DORNIER ServoControl®-2 or DORNIER PneumaTucker® guarantee a process security which is unparalleled in air-jet weaving. Latest technologies such as DORNIER EcoValveControl®+ and Electronic Pressure Monitoring (EPM) ensure highest energy efficiency. The application spectrum of the A2 ranges from technical textiles such as lightest spinnaker silk, tightly woven airbags or conveyer belting to car and airline seating Jacquard upholstery. Fabrics for garments fine worsted or Jacquard damast fabric, function and sportswear fabrics, home textiles for decoration and Jacquard table cloth with matching napkins in multiple widths, sheer window drapery – all these goods and many more can be reliably produced on the A2 with excellent quality.

## A2 DESIGN AND TECHNICAL REFINEMENTS

The mass-reduced but extremely stable reed bar guarantees an exact and well-balanced reed beat-up. The vibration behaviour is significantly improved and start marks are practically eliminated. The bilateral reed drive of the A2 is equipped with a main shaft rotating at accelerated speed, which connects the two gearboxes. Combined with a drive train section, it forms an exceptionally sturdy unit. The two high-precision synchronously running gearboxes guarantee an optimal dynamic behaviour - even at highest speeds. The durable DORNIER main drives rely on leading edge technology to deliver ideal production conditions and maximum insertion performance. Automatic Start Mark Prevention (ASP) guarantees optimum start-stop behavior. The patented DORNIER SyncroDrive® with intelligent control allows extremely low speed fluctuations even with high numbers of shafts and for large-size Jacquard machines. DORNIER SyncroDrive® thus enables reproducible production and supports intuitive production parameter optimization. DORNIER DirectDrive is the ideal main drive concept for high-performance air-jet weaving machines with cam motion or DORNIER EasyLeno®.

The active filling insertion of the new A2 is efficient, reliable and flexible. DORNIER Permanent Insertion Control (PIC) continuously monitors all weft insertion elements. The patented DORNIER ServoControl®-2 system continuously adjusts the air pressure of main and pre-nozzles on the left-hand side of the machine in order to precisely maintain the

target filling yarn arrival time on the right-hand side. The A2 stands for low air consumption thanks to innovative valve control, optimized compressed air supply, and high efficiency thanks to intuitive operation and automated processes. The elements of the A2's filling insertion such as the precise acceleration with the pre and main nozzles, the safe transport by the DORNIER single-hole relay nozzle and the precise shot monitoring by the DORNIER Triple Weft Sensor (TWS) are unique. With the A2, DORNIER has once again impressively underlined its leading position in the manufacture of weaving machines for the highest quality demands.

[WWW.LINDAUERDORNIER.COM](http://WWW.LINDAUERDORNIER.COM)



DORNIER booth © 2023 TexData International



DORNIER P2 rapier weaving machine  
© 2023 TexData International

## JAKOB MÜLLER SHOWED SOLUTIONS FOR RECYCLED AND BIODEGRADABLE YARNS

The Jakob Müller Group has introduced various machines capable of processing recycled and biodegradable yarns.

In the narrow fabric weaving segment Jakob Müller debuted the electronically controlled Jacquard needle weaving loom NFMJ 53 4/66 equipped with a Jacquard of type SPE3 producing elastic tapes for undergarments. The supply of elastic threads (elastic biopolymer with a fineness of 110 dtex, wrapped with TENCEL® Lyocell ) is implemented via a driven double roller system. The exhibited high-performance narrow fabric loom NFM@ 53 2/130 had two MÜTRANS® thread transport systems operating independently of each other, which allows different weft materials to be processed and/or two products with different tape widths to be produced at the same time. The supply of elastic yarn is implemented via an electronically controlled and driven double roller system.

In the label weaving segment Jakob Müller showed the rapier weaving machine MÜGRIP® MBJ8v 1/1380 which is a further development of the highly successful MBJ8 series. The rapier weaving machine MBJ8v LXL PRO 8192/6912T equipped with Stäubli LXL PRO produced labels with slit edges. Also on display was the high-performance narrow fabric loom NFMJ 80 8/42 768 MC. It is designed for the production of labels, name tapes and decorative ribbons with woven edges.



Rapier weaving machine MBJ8v LXL PRO 8192/6912T © 2023 TexData International



Electronically controlled Jacquard needle weaving loom NFMJ 53 4/66 © 2023 TexData International

All machines – with the exception of the MD 2/130 – are pre-configured ready for integration into a network and can be connected via “mymuenet®”, the digitalization portal of the narrow textiles industry. These machines are also equipped with the MLC machine control system and the MÜDATA® M-series control platform as standard.

[WWW.MUELLER-FRICK.COM](http://WWW.MUELLER-FRICK.COM)

## CREALET PRESENTED KAST ECR

Crealet introduced the new narrow weaving warp tension control system KAST ECR connected to a Jakob Müller MD 2/130 narrow fabric loom which is designed for the production of medium-heavy webbing in the field of load securing and lifting equipment. This new fully-automated solution for electronic warp feeding of narrow fabrics is designed to offer best results in quality, productivity, and profitability.



Crealet's new KAST ECR © 2023 TexData International

With KAST ECR, warp tension is monitored with load cells or alternatively with inductive distance sensors. The control unit shows either the tension or the position of the pendulum. Many functions of the established Crealet BLDC control unit – highly appreciated by customers – were additionally adopted for this control method. The KAST ECR was engineered to achieve increased fabric quality and productivity. The new warp tension control for ribbon weaving machines offers even more advantages – such as reducing labor costs by simplifying warp tension adjustment and facilitating repeatability.

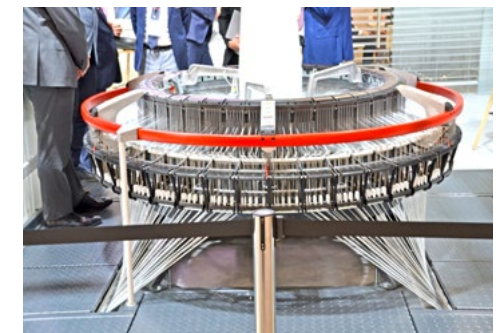
[WWW.CREALET.COM](http://WWW.CREALET.COM)

## STARLINGER PRESENTED THE NEW FXA 6.0 CIRCULAR LOOM

For over 50 years, Starlinger has been a leader in the technological development of circular looms for the production of woven sacks from plastic tapes. With the new six-shuttle circular loom FXa 6.0, the company has introduced an even more efficient and user-friendly machine that produces polypropylene tape fabric of highest quality. The FXa 6.0 circular loom achieves a production speed of up to 1200 picks per minute and is designed for the gentle and energy-efficient production of light tape fabrics from 45 g/m<sup>2</sup> to 140 g/m<sup>2</sup>. Regarding machine control, a 7-inch touchscreen display and a high-performance CPU ensure convenient operation.

"The FXa 6.0 also features a so-called IQ of 350. This means that on average there is only one warp tape break every 350 metres - an immense advantage in terms of machine downtime and work for the machine operators," told us Harald Neumüller, CSO of Starlinger.

[WWW.STARLINGER.COM](http://WWW.STARLINGER.COM)



FXa 6.0 circular loom © 2023 TexData International

## STÄUBLI PRESENTED INNOVATIONS ACROSS ITS PORTFOLIO

Stäubli presented numerous innovations throughout its portfolio. Robustness, high performance, speed, quality, competitiveness and flexibility are all parts of Stäubli's DNA. Worthy of particular mention are the new S3280 rotary dobby in the field of dobby weaving, the new model series of the SX Pro, LX Pro, LXL PRO and LXXL PRO as well as the new N4L PRO in the field of jacquard weaving, the new SAFIR series of drawing-in system with Active Warp Control 2.0 (AWC 2.0), Industry 4.0 solutions with the MyStäubli portal and Active Productivity Control, and last but not least the premiere of the new ALPHA 580 UNIVERSAL for weaving carpets and technical textiles.

### SAFIR S60 AUTOMATIC DRAWING-IN SYSTEM – NEW WITH ACTIVE WARP CONTROL 2.0 (AWC 2.0)

The SAFIR series of drawing-in systems offers unique advantages for efficient style changes. With its Active Warp Control technology, Stäubli has been setting standards in yarn recognition and management for many years. Now Stäubli presented the latest development ACW 2.0. Stäubli states that the most modern requirements for woven fabrics can be met only if the warp yarn is drawn into the weaving harness in the weaving preparation department actively, automatically, and with perfect sequence. Stäubli is setting new standards here with AWC 2.0 for the automatic drawing-in of warps. The technology enables the optical, non-contact recognition and measurement of yarn properties. Sophisticated algorithms and cunning software enable fast, error-free, automatic feeds - all supported by smart sensors and optics.

The essential function of the state-of-the-art AWC 2.0 technology is interpreting the measured data through image processing and data analytics. This allows the determination of titre, colour, twist direction and, within certain limits, even hairiness, transparency, and monofilament or multifilament characteristics. For multi-coloured warps, AWC 2.0 can detect a great number of colour nuances per warp. This gives mills expanded capabilities to produce innovative, outstanding, and unique designs. In addition, SAFIR machines now integrate the new secure cloud-based productivity control solution Active Drawing-In Control that enhances the workflow in weaving preparation. It includes production monitoring, remote assistance, outsourced Stäubli diagnostics and machine maintenance.

### NEW S3280 ROTARY DOBBY

The new S3280 rotary dobby is designed for ultra-high-speed operation with a minimum of vibration and ensuring reliable performance. This dobby, coupled with the new e32/33 G transmission, is a must-have solution for frame-weaving mills that demand the utmost in productivity, Stäubli says. The S3280 offers, among other things, a reinforced monoblock housing allowing heavier loads, optimized temperature control with fully integrated cooling system, improved performance and longer service life for the levers, a new lubrication system with important oil volume reduction and, with the new e32/33 G transmission, capacitive, maintenance-free roller bearings with reinforced DRC quicklink system.

### LX PRO, LXL PRO, LXXL PRO JACQUARD MACHINES – FEATURING ENERGY SAVINGS

The PRO series of Jacquard machines was launched at the end of 2022. These machines have already convinced Jacquard weavers around the world who seek top



The SAFIR S60 automatic drawing-in machine featuring AWC 2.0 © 2023 TexData International



The new N4L PRO in front of the Jacquard installations © 2023 TexData International



The huge and impressive Stäubli booth © 2023 TexData International



Stäubli rotary dobby © 2023 TexData International

energy efficiency in the production of flat, terry, or OPW (one-piece woven) fabrics. Here, Stäubli showed three complete Jacquard installations in operation producing trendy fabrics. Available in formats ranging from 4,608 hooks (LX PRO) to 25,600 hooks (LXXL PRO), the PRO Jacquard machines feature Stäubli's exclusive NOEMI electronics architecture and the state-of-the-art MX PRO module. The new MX PRO module is the heart of the Jacquard machines. Together with NOEMI, MX PRO offers reliable hook selection for all fabric types. It is compact, maintenance-free and made of dimensionally stable composite materials. In addition, it has a newly developed electromagnet. This combination perfectly integrates the constraints of high-speed weaving, temperature, and the significant number of hooks to be lifted.



The new ALPHA carpet weaving system  
© 2023 STÄUBLI

#### N4L PRO FOR LABELING ON SELVEDGES

The new generation of Name Jacquard machines, the N4L PRO, is available in two formats: 80 hooks and 128 hooks. The robust, dust-proof and ergonomic design ensures stable and vibration-free machine operation. Other advantages are the high adaptability to the weaving reed width, the new Mini-Quick connection (patent pending) for easy hooking and unhooking of the harness cords, a user-friendly TC8N control with intuitive touch screen and completely new mechatronic design, for improved stability of signal transmission and significantly reduced maintenance and easy servicing.

#### NEW ALPHA CARPET WEAVING SYSTEM

An absolute highlight of the Stäubli booth was certainly the new ALPHA carpet weaving system, which wove live carpets of various types on an hourly basis. Visitors were able to walk around the weaving stand and observe the double carpet production. ALPHA has many newly developed components that have never been exhibited before.

#### NEW MYSTAUBLI PORTAL

Last but not least, Stäubli presented its new customer portal: MyStaubli. It includes an equipment centre that serves to keep customers fit for efficient maintenance and help them get the most of the Stäubli machinery and solutions. It makes it easy for customers to take proper care of their machinery, optimally train their team complete their knowledge and take advantage of the redesigned e-shop.

[WWW.STAUBLI.COM](http://WWW.STAUBLI.COM)

#### SMIT PRESENTED THE SPEED AND EFFICIENCY OF THE NEW 2FASTi

SMIT, the renowned producer of weaving machines and member of the SANTEX RIMAR Group, presented the further development 2FASTi of its flagship, the 2FAST High-Speed Weaving Machine. The 2FASTi machine improves productivity characteristics in terms of speed combined with efficiency and versatility in a wide range of production. Fabrics for the fashion, home textile, furnishing and automotive industries, both dobby and jacquard, as well as fabrics for technical applications produced with a wide range of fibers and gauges, are now produced with excellent quality and performance on the SMIT 2FASTi machine. The 2FASTi is equipped with a new SMIT LOOM CONTROL PANEL, which makes operation more accurate and faster thanks to the touch screen. The display is also available in versions with 15" Full HD. 22 languages are available and there are 5 different authorization levels. Clear and intuitive icons facilitate learning and speed of interaction. The new panel offers unlimited history storage and provides the view of statistical and production data in the form of tables and histograms. In addition to the new control panel, there were a large number of modifications and improvements to the machine. In addition, the new 2FASTi has been equipped with numerous new components. These include a new new electronic control, a new back-rest control, the new Leno-force, a new material for the lateral ribbon guides,

a new forced oil circulation, a new cloth roller drive, new pre-loaded fabric pressure rollers and a new reinforced take-up. Another focus of the presentation was, of course, 2SAVE, the world's first and only weft tension control that saves selvedge at both left and right sides of the woven fabric, realizing pick-by-pick sustainability through fabric waste reduction.

[WWW.SANTEXRIMAR.COM](http://WWW.SANTEXRIMAR.COM)



© 2023 TexData International



The new SMIT LOOM CONTROL PANEL  
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The FAST name stands for Flexible Advanced Shuttleless Technology – and 2FAST is the pride of SMIT © 2023 TexData International

## ITEMA GROUP PRESENTED THE NEW EVO RANGE

Itema Group, the Italian global leading provider of advanced weaving solutions, presented the new EVO Range which represents a multitude of improvements in almost all areas. There are new machine components, changes to the design, expansion of data processing, extension of successful ideas and even optimization in the area of machine technologies. Above all, it offers an even more advanced solution for weft transfer to improve versatility and machine performance. Key machine components have been optimized to further improve machine performance, ensure the best possible machine accessibility, and achieve unsurpassed reliability, while maintaining the well-known compactness of Itema weaving machines, which provides weavers with valuable additional space in the weaving room to install more looms. Innovative digital software is used to improve the user experience and optimize textile production, such as iKNOW™ - the innovative tool that incorporates all the know-how accu-



Also on display was the new A9500 EVO weaving a bottom weight from combed cotton © 2023 TexData International

mulated over the years by Itema's textile experts - and MyWeave™, the new advanced weaving monitoring system.

### ISAVER® ECO. ISAVER® TECH. ISAVER® FANCY.

In addition, the EVO Range includes the new iSAVER® range, which after its undisputed market success in denim weaving, is now available in up to 6 colors and for many other fabrics, significantly expanding the application possibilities of sustainable weaving.

### R9500 EVO

Lets have a closer look at R9500EVO. It comes to the market with significant improvements that further enhance textile mastery, eco-efficiency, performance through digitalization, and easy weaving. Itema divides the advantages of the new ECO Range into four categories: Performances, Easy Weaving, Eco-Efficiency and Textile Mastery. Performance benefits include the latest generation EVOConsole with touch, full glass, capacitive display which offers wi-fi and Bluetooth connectivity and is prepared for data analysis and IoT functionalities as well as MyWeave, the new Itema mill monitoring system that provides both textile and production parameters management. Eco-Efficiency stands for the new iSaver range, energy savings by optimizing the machine lubrication system and main mechanical components, a direct drive motor with oil cooling and the ACIMIT Green Label Certification. It testifies how the R9500EVO is an environmentally friendly machine by meeting stringent parameters.



itematech showed the Hercules machine in 3800mm weaving a heavy filter fabric © 2023 TexData International

Easy Weaving stands for a new front cover with integrated pushbutton panels. The front cover has been completely redesigned to enhance ergonomics for weavers. Pushbuttons panels are now integrated into the cover and are easy to reach from different parts of the machine's front frame, thus ensuring total control of the machine functioning in all weaving widths. And finally, Textile mastery includes an optimized weft selector, a multiple choice of weft cutters (Rotocut Weft Cutter & MiCut Motorized Weft Cutter), the unique itema shed geometry and two weft transfer ranges. SK EVO is the evolution of the Itema SK Weft Transfer with guided hooks. It comes here further optimized to meet any weaving need maximizing performances and versatility.

The FPA – Free Positive Approach – Weft Transfer with no guiding elements in the shed comes here in multiple rapiers versions to reach unbeatable machine and textile performance.

### EVO ON STAGE

Itema presented in total 12 EVO weaving machines on show. Five were on the partners' booth (Stäubli, Van De Wiele, MEI, and Julibao) and seven on the Itema booth. Here, Itema showed two R9500 EVO, one 9500 EVO with Stäubli Jacquard, one R9500 EVO denim, one R9500 EVO terry with Bona Jacquard, one A9500 EVO und one Hercules machine from itematech. On stage were styles, designed in cooperation with leading textile companies – all Itema customers - such

as ISKO, Mantero Seta, Drago Lanificio in Biella, Tessitura Marinoni, Frau Pérez Textiles, and Finsa Textil. It was all about weaving these sophisticated and complex patterns, styles and materials to showcase the advantages of IteMa weaving machines, first and foremost the R9500 EVO, and demonstrate how easily it could master the challenges. For example, a beautiful high-fashion women's garment was woven on the IteMa R9500EVO rapier using the Stäubli Jacquard LXXL Pro, courtesy of IteMa customer Mantero. It consisted of 10 different weft yarns, ranging from unreinforced lurex to sophisticated, coarse and fancy yarns.



R9500 EVO weaving a nautical sails reinforcement  
© 2023 TexData International



The R9500 EVO attracted a great deal of interest with its wide range of improvements and enhancements. The new push buttons are clearly visible on the frame  
© 2023 TexData International



iteMa R9500 EVO terry weaving a terry towel - shedding by Bonas Jacquard Si6 6144 hooks  
© 2023 TexData International



R9500 EVO in 1900 mm weaving a tapestry - shedding by Stäubli Jacquard LXXL 20480 hooks  
© 2023 TexData International

### "HELLO ITEMA" CUSTOMER PORTAL

Last but not least, iteMa presented new digital solutions, such as the brand-new IteMa Customer Portal "hello iteMa". It is loaded with a full set of functionalities and opportunities developed to make weavers' working lives easier and to add value to their investment.

[WWW.ITEMAGROUP.COM](http://WWW.ITEMAGROUP.COM)

## PICANOL PRESENTED **ULTIMAX** AND CALLED IT A **REVOLUTION**

Picanol presented its latest high-tech weaving machines and services. The eye-catcher at the Picanol booth was the world premiere of an all-new and revolutionary rapier weaving machine, the Ultimax, that will become available in the first quarter of 2024. Ultimax focuses on three pillars: ultimate performance, ensuring high-quality output; readiness for the sustainability requirements of tomorrow, supporting eco-conscious production; and a seamless user experience through a significant level of digitalization.

To realize this groundbreaking weaving machine, Picanol stated, both its experienced engineers and a new generation of young engineers came together to mix fresh ideas with years of experience. And armed with the latest design techniques, they critically examined and questioned each and every element of the machine. The result is a focused and razor-sharp machine, that is ready to go with audacious speed, precisely reacting to your slightest touch or setting, and faultlessly bringing top-quality output - both now and in the future. Even Picanols' classic exterior design has been radically disrupted to make it clear from the outside how cutting edge the Ultimax is on the inside, explained Johan Verstraete, Vice President Weaving Machines.

In total, Picanol had 12 machines on display at ITMA 2023. In addition to 6 rapier weaving machines, Picanol will also present 4 airjet weaving machines featuring new developments.



The new Picanol Ultimax © 2023 TexData International



Picanol OmniPlus-i Connect © 2023 TexData International

In addition, Picanol launched a speed increase on its airjet platform, the OmniPlus-i Connect. Also on display for the very first time was a brand-new leno system, the o-Leno, which combines smart performance, user-friendliness, and intuitive control.

### NOVELTIES IN PICCONNECT

With PicConnect, Picanol is centralizing its digital tools and services in one new fully digital platform. Visitors were able to discover all the benefits and latest features of PicConnect. Among other things, the recently released features such as alerting, access control, the action center, and the export of monitoring data found the attention of many visitors.

[WWW.PICANOL.BE](http://WWW.PICANOL.BE)

## VANDEWIELE: HUGE PORTFOLIO - COUNTLESS INNOVATIONS

Since the takeover of the Savio Group, the Belgian company Vandewiele has become one of the largest textile machinery manufacturers in the world, the market leader in some areas, and certainly offers the largest portfolio along the textile chain. In the core area of its activity, Vandewiele paid special attention to the RCF carpet weaving machine and the new generation HCE3+, as well as to the Bonas SI range.

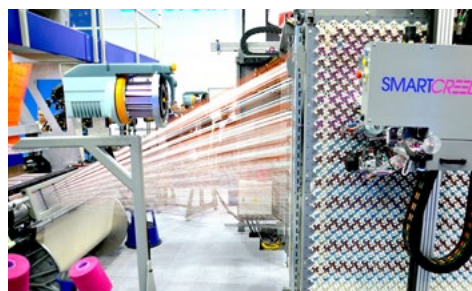
### MACHINES FOR ALL CARPET TYPES

Vandewiele presented three new carpet weaving machines. The RCF carpet weaving machine with the digital "Fast Creel", weaving at highest speed ever, up to 250 rpm. The new generation of Expert machines have all yarns continuously controlled, with repeatable digital settings on the weft, the ground beam let-off and the pile yarns selected by the electronic Jacquard. This allows the highest loom speeds and reduces down times.

The RCF machine also offers flexibility for quick color changes, economy (less machine standstill and plannable creel changes) and less waste yarn. The three rapier cut-loop machine USF in Fast Creel solution has possibilities of alternative weave structures and perfect tension control in the loops. Carpet manufacturers can look forward to higher efficiency, unparalleled production and improved sustainability. In the segment of Handlook weaving machines, the new generation HCE3+ is



Vandewiele showed an introductory film for the complex production possibilities from her portfolio © 2023 TexData International

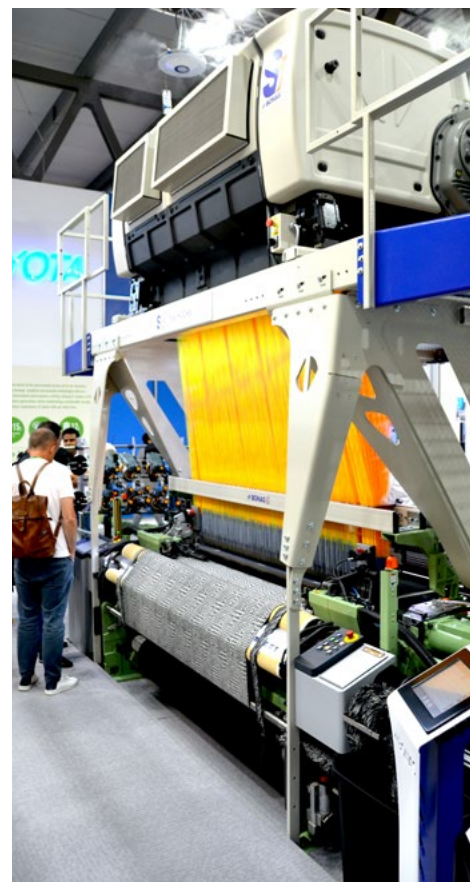


SmartCreel was demonstrated on the booth © 2023 TexData International

equipped with the Vandewiele U4 jacquard machines, to apply highly productive three rapier weave structures and to make local flatweave effects, which reveals new possibilities in designing and writing text.

BONAS future proof digital machines with maximum weaving design flexibility today are paramount. The Bonas jacquard range, with up to 31.104 hooks in a single jacquard or 62.208 hooks when coupled, already dominates many markets in fashion, home, floor, and technical textiles. Low energy consumption, even for high-speed weaving, is additionally emphasized on the Si range. The Smart Drive is

equipped with a unique feed forward system, predicting the design-related load so minimizing the over-all power consumption. Clear and reliable bi-directional data communication is made possible by the fast responding, easy to use Ce controller. Preventive Maintenance and Smart Energy Management, to name just a few features, are easily accessible.



Bonas Si in action. A total of 7 Bonas Jacquard machines were on display at the show © 2023 TexData International



The new X4 Yarn feeder © 2023 TexData International

### HST NEW SPEED BENCHMARK

In the tufting segment Vandewiele Cobble showcased its latest innovation, the High Speed Tuft (HST) machine. The company's new technology promises to revolutionize the tufting industry, offering a faster and more efficient tufting solution. The HST machine was designed to meet the growing demand for high-quality and high-speed production. Thanks to the remarkable breakthrough production speed, the HST is offering unprecedented levels of productivity and efficiency.

IRO-ROJ presented the new X4 Yarn feeders with "integrated accessory display" - setting a new feeder standard. The current settings and any alarms can be easily monitored using the integrated display - with any required changes being easily made using the adjustment knob.

### TEXCONNECT FACTORY 4.0 CONCEPT

All the Vandewiele machines can be connected through cloud computing to the "TEXconnect" supervision system to comply with the Factory 4.0 concept.

[WWW.VANDEWIELE.COM](http://WWW.VANDEWIELE.COM)

## SHIMASEIKI REBORN

ShimaSeiki displayed new next-generation machines and prototypes represented by the letter "R," which stands for "Reborn" and was also the basis for the exhibition concept. SHIMA SEIKI Reborn represents a return to the origins of the company and its products, as well as a renewal of passion and commitment to innovation. In its 5th generation, SHIMA SEIKI's SWG-XR® flagship WHOLEGARMENT® knitting machine has raised the benchmark once again for speed, efficiency, quality and reliability. The new name lends tribute to the SWG-X, the world's first 4-needle bed machine. Capable of very high quality and stability in all-needle knitting of WHOLEGARMENT® products,



SHIMA SEIKI's SWG-XR® flagship WHOLEGARMENT® knitting machine © 2023 TexData International

SWG-XR® features an all-new spring-type moveable sinker system and a compact, light-weight carriage featuring 4 systems as well as auto yarn carriers. All contribute to increased productivity of more than 25% over the previous MACH2®XS machine, as well as increased product range using a wider variety of yarn for supporting knits for all seasons, and higher quality for knitting beautiful fabrics and silhouettes.

The N.SIR123SP computerized knitting machine with intarsia capability featured a special loop presser bed for producing hybrid inlay fabrics with both knit and weave characteristics. Shown in 18 gauge, N.SIR123SP also featured the special i-Plating® option, capable of alternating yarn colors in any pattern, producing jacquard-like designs in light-weight plain jersey stitch.

Next-generation shaping machine lineup SES-R has been revamped with an all-new sinker system that is more capable in knitting dimensional sinker patterns, as well as flechage/short-row knitting in combination with a new transfer jack system. Also with a new sinker system, a belt-driven 2-cam carriage and auto yarn carriers SFG-R is a completely new machine for knitting gloves and SPG-R for knitting work gloves with pile fabric.

SDS@-ONE APEX4 3D apparel design system and APEXFiz® subscription-based design software support the creative side of fashion from planning and design to colorway evaluation, realistic fabric simulation and 3D virtual sampling.

[WWW.SHIMASEIKI.COM](http://WWW.SHIMASEIKI.COM)

## SUSTAINABILITY WITH MAYER&CIE

Mayer & Cie. showed 3 circular knitting machines and demonstrated a variety of innovations on them. The double jacquard OVJA 2.4 EM is currently the most productive machine in its class. It knitted double face fabric with lay-in yarn. Spacer fabric has been added to its portfolio. One of the bestsellers, the Relanit 3.2 HS has been equipped with new yarn guides, a needle with pre-determined breaking point and spring sinkers to further reduce machine downtimes. New to the portfolio is the highly efficient SF4-3.2 III for light-weight and elastic 3-thread fleece.



Mayer & Cie. OVJA 2.4 EM © 2023 TexData International

Machine-specific upgrade kits extend existing machines' lifespan by boosting their performance, productivity, or reliability. knitlink is a digital service platform to make working more profitable. Innovations such as knithawk, a tool for optical textile monitoring, are major steps towards a more sustainable textile production. The lubrication system Senso Blue RS and a new laser hardening process work towards the same end.

[WWW.MAYERCIE.COM](http://WWW.MAYERCIE.COM)

## FABRIC QUALITY WITH MEMMINGER IRO

The world market leader in the development, production and sale of yarn feeders, monitoring and lubrication systems for knitting machines, MEMMINGER-IRO, presented many new developments such as KNITSTORE K 52/ K52 ATC and SFE 2 new generation storage feeders, the MCI Memminger Communication Interface based on the latest technology and the new powerful motor drive belt system for large diameter circular knitting machines, MRA 4.

The servo motors of MRA 4 completely replaces the quality adjustment pulley assembly. This results to receive a constant, precise stitch length and therefore an improved fabric quality. Article reproducibility is more accurate. The technical parameters of the motors are adapted to the trend of faster circular knitting machines with more feeders. The system is more economic which results in a much shorter return on investment.

[WWW.MEMMINGER-IRO.DE](http://WWW.MEMMINGER-IRO.DE)



Memminger IRO MRA4 © 2023 TexData International

### THE KARL MAYER GROUP HIT THE MARK

For the KARL MAYER GROUP, exhibiting under the tag line of 'Master the Change – profitable, flexible, sustainable', ITMA 2023 ended with record visitor numbers. The innovative industry pioneer exhibited solutions and innovations designed to maximise customer success over an area spanning 1,350 square metres - a total of eleven machines from all of its business units, along with numerous innovative, on-trend textile applications with exceptional new business potential, and a number of groundbreaking digital solutions. The global player's booth really hit the mark. Right from day one, the KARL MAYER GROUP stand was inundated with what could only be described as a visitor stampede.

With just under 2,900 recorded contacts, the number of visitors exceeded all expectations significantly. The original KARL MAYER business units of warp knitting, warp preparation and technical textiles recorded a 20 to 30% increase in the number of visitors compared to ITMA 2019 in Barcelona. There was also huge interest in the exhibition by the business unit STOLL, which joined the others in 2020.

The stand area dedicated to flat knitting was the Group's busiest. Positive figures were also recorded in terms of the high number of new contacts made, which represented around 30% of the total. Many textile brands, but also visitors who did not hail from this industry, were interested in the potential with regard to sustainabil-

ity and business development offered by innovations along the entire textile manufacturing chain, in which the KARL MAYER GROUP and its valuable solutions represent an important link.

#### CEO ARNO GÄRTNER DELIGHTED

KARL MAYER GROUP CEO Arno Gärtner stated: "The textile industry has finally become highly aware of the topic of sustainability. Our customers already offer a wide range of products with a low environmental impact; however, we were nevertheless able to show them solutions that unlock completely new possibilities for them. What is important for us is that our products are sustainable as well as profitable. Our new jacquard raschel machine for processing staple fibres – for example, 100% cotton – and the new energy monitoring system in our HKS range for matching the energy consumption to the production targets generated a huge amount of interest. We intend to continue our development work in these areas. The sustainability highlights from the other business units, including an extremely fine flat knitted all-rounder T-shirt made from bio-based materials with a back and front worked from one piece to avoid unnecessary waste, our latest weft-insertion machine WEFTRONIC® II G, which also produces less waste, and CASCADE, an innovative steam and condensation system that uses up to 7% less steam during the drying process of sizing and indigo dyeing machines, also attracted a lot of attention."



Karl Mayer's Multi-Matic® 32 Compact sample warping machine © 2023 2023 TexData International

In the warp preparation sector the MULTI-MATIC® 32 Compact was a highlight. The new warp sampling machine is more than twice as productive as the previous model with the same space requirement, and with simple, fast pattern changes and short setup times, it enables the company to react flexibly to the needs of the market. The fully automatic model with optimised ergonomics can also be operated safely despite a shortage of skilled workers.

Another solution for more customer benefit is the LINK-MATIC® system. With this sophisticated automation solution, the batch changes on indigo and sizing machines can be simplified considerably, thus increasing productivity. An increase of up to 30 % is possible, depending on the number of batches.

#### BLUEDYE FOR SUSTAINABLE DENIM

For the denim sector the KARL MAYER GROUP presented a highly innovative solution which ensures greater sustainability and lower costs. The nitrogen-based dyeing technology BLUEDYE minimises the immense amounts of water



WEFTRONIC® II G shown at ITMA comes with new features and upgrades for even greater efficiency © 2023 TexData International

and chemicals used. The need for hydro-sulphite and caustic soda - the main environmental pollutants of the process - can be more than halved and the volume of water required can also be significantly reduced. In addition, less yarn waste is produced. BLUEDYE thus scores equally in terms of environmental protection and costs. Operating costs can be reduced by up to 20 %.

### NEW RASCHEL MACHINE FOR SPECIAL LOOKS

From the Raschel machine range, the new RSJFS 4/1 EL, 130", E14 was presented. This high-performance model produced



RSJFS 4/1 EL – CROCHET-KNIT machine  
© 2023 TexData International



RDPJ 6/2 EL MC for spacer fabrics  
© 2023 TexData International

fabrics with a flat or circular knitted-like look in hand-made style while offering maximum productivity. Dense, complex patterns and crochet- and knitted-like designs are possible, as are open structures, all of which open up new avenues for knitting technology in the fashion sector. A special configuration ensures the implementation of the new knitted fabric looks. As a new sustainability feature, the machine can process staple fibers and bio-based materials such as 100% cotton, and in the jacquard bars, coarse yarns up to 1,000 dtex.

The WARP-KNITTED CROCHET-KNIT section showcased the possibilities of the new RSJFS 4/1 EL, including creations in a trendy crochet look made entirely of cotton. The use of natural fibers meets the growing market demand for sustainable products.

### NEW DOUBLE-BAR RASCHEL MACHINE

The RDPJ 6/2 EL MC, 138" marks the premiere of a new double-bar raschel machine. With its potentiated patterning options, the newcomer is revolutionizing spacer fabric design. More color and new jacquard techniques make highly creative multi-color designs possible, making spacer textiles highly interesting not only for the established footwear sector but also for the fashion and home textile sectors. If spun-dyed yarn is used, the textile dyeing process is omitted. This avoids environmental pollution and consumption of resources and, in addition to the ecological footprint, also reduces the costs of the textile value chain.

### LATEST MODEL OF DIGITAL TRICOT MACHINE

An HKS 3-M ON, E 32, 130" completed the machine show in the warp knitting sector. The latest model of the digital tricot machine generation combines top machine performance with the latest technology features for maximum efficiency and competitiveness. The flexible all-rounder works with pattern data from the cloud and thus enables the fastest possible reactions to trend changes: Patterns can be changed at the click of a mouse on the computer and without manual intervention, as when working with pattern discs. In addition to the handling effort, costs and environmental pollution caused by the production, transport and storage of mechanical data carriers are eliminated. Moreover, patterns are 100% reproducible, also without any manual adjustments.

### SUSTAINABILITY GALLERY

In a compact sustainability gallery they presented examples of best practice from all its Business Units. Furthermore, a completely new solution for the vertical greening of cities was showcased. The core of the innovation is a net produced on warp knitting machines with weft insertion by KARL MAYER Technische Textilien

### STOLL COMBINED KNITTING, WARP-KNITTING AND WEAVING

With numerous new features and optimizations that are finding their way into many machine types, STOLL offers its customers significant added value, focusing on reduced operating costs, more sustainability and extended application possibilities.

The new ADF 530-32 ki FLEX E7.2 takes versatility to a new dimension. It really is "one machine for everything", capable of producing a unique range of different knitted articles, which will be vividly demonstrated in the trade fair live mode. The customer can thus react quickly and flexibly to changes in the order situation or take advantage of new business opportunities. With the ADF 830-24 ki W knit and wear E3,5.2, which will also be on show, the ADF family has been extended to include the production of coarse knitwear with weft insertion. This makes it possible to achieve novel weave-like looks and material properties that provide exciting impulses for the home textiles sector. In contrast, the ADF 530-32 ki BcW E20 was presented as an ultra-fine machine that enables very light flat knitted fabrics with high-resolution designs. Finally, STOLL took a look into the future with the ADF 530-16/4 ki WWK E7.2. This prototype combines knitting, warp-knitting and weaving technology and enables textile structures with sectoral poly-directional reinforcements and zones, novel designs and functions.

[WWW.KARLMAYER.COM](http://WWW.KARLMAYER.COM)



High interest in STOLL flat knitting innovations  
© 2023 TexData International

## GROZ-BECKERT SHOWCASED SUSTAINABLE INNOVATIONS

Groz-Beckert presented its numerous innovations to more than 7,000 customers and business partners, as well as welcoming many other visitors to its booth – including over 280 students. An international audience gathered at the Groz-Beckert booth: guests came from 84 different countries.

Groz-Beckert presented numerous innovations from its six product divisions Knitting, Weaving, Felting, Tufting, Carding and Sewing. One focus of the innovations was on the topics of efficiency, process stability and sustainability. The topic of sustainability was reflected both in the products and in the production of Groz-Beckert itself. Here, a separate area, the Groz-Beckert Gallery, showed how Groz-Beckert is making its own production and its sites more sustainable.

The Gallery also offered insights into general topics relating to Groz-Beckert in form of graphics, animations and videos. Small explanatory texts provided additional background information. The Gallery enabled visitors to get to know the company from a different perspective.

### COOPERATION CORNER

A special magnet of the booth was the Cooperation Corner of the Knitting product area. Here, two new knitting systems and a new compound needle for circular knitting machines were presented, which were developed together with machine manufacturers. In addition, live presentations were held to highlight the successful cooperations in greater detail. The flat knitting, legwear and warp knitting product groups also had innovations in store: from special application needles (SANTM) and long-life dur™ needles to new modules and system parts.

### MUCH INNOVATION FOR KNITTING

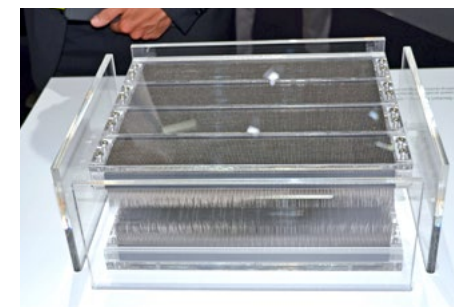
One of the new knitting systems is the innovative LCmax™ circular knitting machine needle in combination with the newly developed sinker SNK-SF. The LCmax™ features a completely new, wave-shaped shank geometry.

The new SNK-SF sinker also features significantly higher wear resistance. Together with the innovative sinker SNK DUO-OL, the new SAN™ DUO forms the second new knitting system. Both the SAN™ DUO and the SAN™ DUO feature a particularly low shank with predetermined breaking groove. The low shank minimizes soiling in the knitting process with highly abrasive yarns.

The Flat Knitting product group puts special application needles at the center of its presentation. The SAN™ TT is particularly suitable for multi-thread knitting of narrow loops in the field of technical or medical textiles. The new SAN™ FY is designed for processing robust, uneven fancy yarns.

### TECHNICAL WEAVING REEDS

The Weaving division impressed trade show visitors with its innovative technical weaving reeds. The new product enables the supply in the production of fabrics of high fineness, e.g. for filtration (both wire and plastic fabrics). The division also recorded a special trade show success: the demonstration model of the WarpMaster-Plus was sold directly in Milan to a customer in Turkey.



Groz-Beckert felting needle module designed for the intensive needling technology for lightweight nonwovens © 2023 TexData International



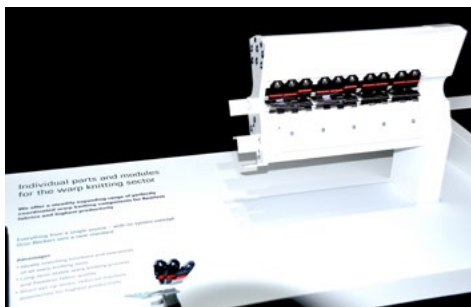
Groz-Beckert SiroLock © 2023 TexData International

### DILO MICROPUNCH NEEDLE

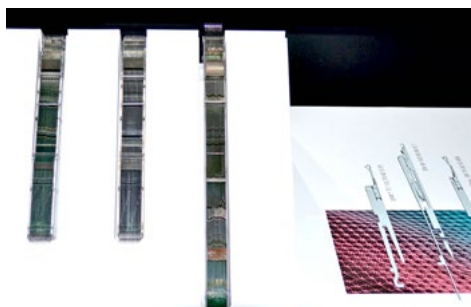
The Felting (Nonwovens) product area presented no less than two world firsts at the fair: a needle with a new notch design and the Groz-Beckert felting needle module for the innovative MicroPunch intensive needling technology (Dilo). Both products met with very great visitor interest. The felting needle modules are characterized by very high deformation resistance and offer new dimensions in needle density. This is made possible by the new intensive needling technology, which was specially developed for light grammages.



Groz-Beckert booth © 2023 TexData International



Sewing needle SAN™ 5.2 © 2023 TexData International



SAN™ knitting needles © 2023 TexData International

The assembly and replacement of the modules are also particularly economical.

The Tufting product area presented its proven Gauge Part System for the production of tufted floor coverings. At the booth, customers were able to see for themselves that the components in the Gauge Part System from Groz-Beckert are perfectly coordinated and guarantee smooth interaction.

### CARD CLOTHING FOR REDUCED CRASH RISK

Various new and further developments were also on show in the Carding product area. For the nonwovens industry, the di-

vision presented, among other things, the world's finest interlinked card clothing for reduced crash risk.

For customers in the spinning industry, the division exhibited a new maintenance-free reel clothing with increased service life and lower maintenance costs. In addition, further developed fixed flats and revolving tops were presented.

The Sewing product area also enjoyed a high number of specific visitors – even though ITMA does not focus on the sewing industry. Interest in the division's various special application needles (SAN™) was correspondingly high. Likewise, the patented quality management system INH (Ideal Needle Handling) received a lot of attention.

The appearance of the Technology and Development Center (TEZ) completed the Groz-Beckert booth. The TEZ experts presented to interested visitors the numerous opportunities available to customers and partners at the TEZ. In cooperation with external partners, the TEZ can be used as an optimization, development or business partner – depending on requirements and customer wishes.

Overall, the ITMA was a complete success for Groz-Beckert. The quality of visitors was exceptionally high – numerous decision-makers and key contacts were present and visited the Groz-Beckert booth.

[WWW.GROZ-BECKERT.COM](http://WWW.GROZ-BECKERT.COM)



Eltex demo machine to demonstrate the most prominent sensors and their functions © 2023 TexData International

### ELTEX PUT EYES ON EYE™

Eltex from Sweden presented innovations for yarn tension control and offered live demonstrations of the latest version of Eye, a versatile multi yarn tension monitoring system. The Eye™ system monitors the warping process prior to weaving which means it is monitoring literally hundreds of yarns in real time on a warping creel. In the complete production chain from winding through warping and to weaving the ACT and ACT-R units make sure the process is run with a correct and constant yarn tension. A latest development is EYE Compact II which has received a lot of praise from the industry. It is small and the size allows it to be mounted close to the needles, just below the puller rollers which are there to help feed the yarns. Sensors can be used for a gauge down to 1/10 inch. Up to 16 sensors can be connected to each LIN bus which let the system control a complete setup of 96 sensors and even more with a slave unit. This makes the system flexible since it can be suited on a large variety of machine brands.

[WWW.ELTEX.SE](http://WWW.ELTEX.SE)

### TOYOTA PRESENTED THE NEW JAT910

Toyota demonstrated its new model air-jet loom "JAT910" which was launched last year. On display were three "JAT910" in different configurations. One produced with new electronic shedding a double sided application with superfine stretch yarn. Another with the new crank shedding a double walled sheet and pillow case. And a third with jacquard machine a bath towel with different pile types. Toyota's new model "JAT910" comes with the latest technology, which has achieved further energy-saving performance and high weaving performance through the adoption of newly developed weft insertion system and a new main motor. The mechanism of the air injection system for inserting the weft yarn has been improved. As a result, the air pressure and the air consumption are reduced by 10% and 20%, respectively, compared with the JAT810. Aside from such improvements, the use of i-SENSOR, the world's first sensor that detects weft yarn insertion timing as the yarn is passing inside the warp yarn, enables the optimum air pressure and weft insertion requirements to be automatically calculated based on Toyota Industries' proprietary algorithm.

[WWW.TOYOTA-INDUSTRIES.COM](http://WWW.TOYOTA-INDUSTRIES.COM)



Toyota JAT910 © 2023 TexData International



Pailung demonstrated its commitment to "Knit Beyond Boundaries" continues to shape the future © 2023 TexData International

## PAILUNG - KNIT BEYOND BOUNDARIES

Pailung presented in total 8 circular knitting machines: Two innovative knitting machines – AlterKnit™ – in single and double knit: the Single Knit AlterKnit™ Electronic Jacquard Auto Striper KSAKCJB3-W and the Double Knit AlterKnit™ Electronic Jacquard KDAKCJ. Four High-speed Knitting Machines increasing production capacity, including the High-Speed Single Knit KS3B-W-0H capable of producing six popular fabric types (Plain Single Jersey/Plain Single Jersey + Lycra/Pique/Pique + Lycra/2 Yarns Fleece/2 Yarns Fleece + Lycra), the high-speed Three End Fleece KF3B-0P, the High-speed Double Knit KD3.2B-0P and the High-speed Terry / Velour KSP-0P.



The cameras for the defect detection are built into the machine © 2023 TexData International

In addition the 4-Way Stretch Double Jersey KD3.2BW and the Double Knit Electronic Jacquard KD2.5CJB-W. These machines offer versatility and flexibility in product range and production capabilities. Pailung can create various fabrics, from basic jerseys to complex structures like rib, interlock, and jacquard. to allows manufacturers to cater to different market demands.

### FABRIC DEFECT DETECTION SYSTEM

Furthermore, Pailung introduced their latest innovative fabric defect detection system. The system uses cameras built directly into the knitting machine and equipped with a computer vision so that faults are detected during production. Such real-time defect monitoring is obviously a significant advantage for textile manufacturers. When a defect gets detected, the knitting machine can be shut down immediately, pausing production until the problem has been solved and reducing the manufacturer's waste fabric losses.

### DIGITAL TRANSFORMATION

There are more benefits of Pailung's new, three-tier software suite. The Pailung Online Monitor System (POMS) allows the technician to control multiple knitting machines from a single computer. All workflows, from production to order scheduling and machine monitoring, can be performed remotely using this central system. All fabrics saved in the KFMS and their corresponding parameters can be accessed through the POMS and both can be further integrated with the MES.

[WWW.PAILUNG.COM.TW](http://WWW.PAILUNG.COM.TW)



Loptex EXA © 2023 TexData International

## LOPTEX EXA CONTAMINATION CONTROL

Loptex presented a completely new system for contamination control. EXA combines multiple technologies which monitor and detect contamination of natural, artificial and synthetic fibers. Precision, efficiency, reliability and consistency of results are the key advantages. In the nonwovens industry Loptex EXA web provides a comprehensive control of contamination on the web, identifying all kinds of defects regardless of their dimension or color. In recycling Loptex already has a wide experience. For instance, the utilization of the EXA system for the recycling of denim effectively separates polyester from the fibres and enhances the quality and suitability of recycled raw material for mixing with other virgin fibers.

[WWW.LOPTEX.IT](http://WWW.LOPTEX.IT)



CHTC complete line in show model © 2023 TexData International

## CHTC SHOWED LATEST COMPLETE LINE

CHTC is probably the largest textile machinery manufacturing company in the world with many subsidiaries such as CHTC Fongs and CHTC JIAHUA Nonwoven. For the nonwovens sector, there is also the SINOMACH brand, under which the company offers machines. CHTC showed a model for a crosslapping spunlacing intelligent production line.

[WWW.HTJH-NONWOVEN.COM](http://WWW.HTJH-NONWOVEN.COM)



Autefa Solutions presented a further developed Random Card Airlay K12 © 2023 TexData International

## AUTEFA PRESENTED LATEST SOLUTIONS FOR AUTOMATION AND SUSTAINABILITY IMPROVEMENT

AUTEFA Solutions showcased their innovative solutions and expertise in advanced materials, digital future, innovative technologies, and sustainability. The textile industry faces many challenges and sustainability is one of the most pressing. Another is the shortage of skilled labor and workers and the related trend toward automation. Autefa Solutions presented excellent solutions to both challenges.

### INNOVATIVE FIBER RECYCLING - SOLUTIONS FOR SUSTAINABLE TEXTILE CIRCULARITY

As sustainability becomes an increasingly important consideration in the textile industry, Autefa is witnessing a significant increase in the demand for textile circularity, with consumers and companies alike seeking solutions to recycle textiles. In response to this trend, AUTEFA Solutions offers a range of innovative solutions designed to process and reuse various types of fibers, including reclaimed, natural, and man-made materials.

### AIRLAY FABRICS FROM SUSTAINABLE SUBSTRATES

Autefa paid special attention to the production of airlay fabrics from sustainable substrates. The web weight here can be 200-10,000 g per sqm and the production capacity is 450 kg/h/m. Applications are needed roll goods for automotive parts, wallboards, geotextiles and insulation.

Concerning sustainability the building and construction industry is no exception. Efficient thermal and acoustic insulation materials play a critical role in achieving energy savings and reducing natural resource consumption in the construction, residential, and automotive markets. Nonwovens producers achieving sustainability goals is by utilizing natural fibers like flax and hemp, as well as replacement fibers such as recycled PET fibers. The use of these fibers is increasing, and for good reason: they are renewable, biodegradable, and have a lower environmental impact than traditional synthetic fibers. For producing insulation products, customers rely on the aerodynamic web forming process with AUTEFA Solutions' Airlay V21/R machine. This process results in an improved MD:CD ratio and a three-dimensional web structure, enhancing the insulation properties of the materials. With over 500 units sold and installed worldwide, AUTEFA Solutions Random Card Airlay K12 with the web forming machine V21/R is one of the success stories in the field of aerodynamic web forming. With the high loft device fiber mats up to 30cm are suitable.



AUTEFA Solutions Automatic Needle Exchanger © 2023 TexData International

### AUTOMATIC NEEDLE EXCHANGER

The re-needling of needle boards in needle punching nonwovens production has to be simple, safe, and efficient to avoid long downtimes and extend the service life of the needle boards. AUTEFA Solutions has developed an innovative solution, the Needle Exchanger, to address these challenges. This machine replaces the physically tiring and risky manual process of needle insertion, exchange, and removal with an automated process that removes the risk of operator injury and minimizes the risk of board damage. The machine is efficient and equipped with an adapted software system, so that reproducibility and safety at every needle exchange are of utmost importance. The Needle Exchanger is the most economical way to perform this service in a nonwoven production line. It is the innovative solution that replaces the manual process with a machine and provides a great return on investment. It is the most economic service machine for needle exchange in nonwovens production.

WWW.AUTEFA.COM



Dilo MicroPunch line © 2023 TexData International

### DILO SHOWCASED REAL GAMECHANGER

Dilo Group from Germany presented its latest developments in needling technology already mentioned at the INDEX trade fair. The further developed intensive needling method "MicroPunch" led to a very many visitors who wanted to get more information about this brand new Dilo technology. All seven days were highlighted by a stream of visitors to the Dilo stand. For sure, Dilo had already drawn attention to the groundbreaking technologies on display in the run-up to ITMA, but had perhaps not expected such interest itself. The MicroPunch technology became the highlight and flagship of ITMA as a real possible displacement technology for more sustainability.

MicroPunch is a web forming and consolidation process which - after many years of research work - can lead to a breakthrough in the market for hygiene and medical felts as well as technical felts, as now finally an alternative has been found to the dominating water entangling technology. Advantages of "MicroPunch" which is based on classical needling technology are a greatly reduced energy consumption for the drive of the production line. Furthermore, the water consumption of ca. 15,000 litres/h can be eliminated as well the need for heating gas to dry the nonwoven. All in all about 70 to 80 % of the installed electrical power and gas capacity are saved and thus a new

approach has been taken to a sustainable production process. In addition, the space needed for installing a Dilo "MicroPunch" production line is about half the space required by a water entangling line. Another advantage is a reduced fibre consumption. The overall cost reduction is about 25 to 50 % for a kilogram of nonwoven in favour of "MicroPunch" for the production of lightweight nonwovens in an area weight of ca. 40 – 100 g/m<sup>2</sup>. Of course, these calculations take into account the currently high electrical power, gas and water costs which favour the mechanical Dilo needling principle.

This technological progress was only possible by the use of an extremely high number of needles in the production line. In view of the economic use of this technology a so called "needle module" was created which dramatically reduces the time for inserting needles into the needle boards. For the insertion of a total of more than 1 million needles in a 2.5 m wide line working time can be reduced to a few hours. For this purpose, the needle module was developed and manufactured together with the specialist of needles Groz-Beckert.

"MicroPunch" products are similar to water entangled products in regard to abrasion characteristics and density; their volume and elasticity are higher which makes the intensively needled material very attractive for medical and hygiene applications. Also some technical applications, such as automotive parts or apparel can be considered, too.

The "MicroPunch" procedure, overall, can be considered as groundbreaking, if both the economic advantages and ecological issues are considered.

### CONFIGURATION OF THE MICROPUNCH LINE

The MicroPunch line consisted of Dilo-Temafa fibre preparation, opening by a BALTRROMIX bale opener, carding willow and dosing opener of the latest design followed by the successful DiloSpinnbau MultiCard fed by a universal card feeder including the new IsoFeed system for reduced weight variation. IsoFeed can add the correct amount of staple fibre volume in areas of lower mass in the flock mat plane, thus correcting weight deviations and improving the overall CV value by ca. 4 %. The very regular web mass at the end of the card allows a reduction of the average weight by approximately 10 % resulting in considerable fibre savings when a minimum weight associated with a high regularity must not be exceeded. The MultiCard was additionally equipped with the new "variogap and speed controller" which allows an optimum of gap



The finished nonwoven, protected from too curious eyes, could be inspected on demand © 2023 TexData International

and speed adjustments at the fifth worker and at the doffers. The web quality during the show impressed by superior regularity. This is particularly important when no crosslapper is used as was the case at ITMA where the card fed the following needle punching equipment directly.

The Dilo team installing this complex line within 10 to 12 days including commissioning demonstrated its capabilities under high time pressure. It gave an example to all involved with their efficiency, coordination and professional attitude. This resulted in a great performance and added to an excellent atmosphere during these days together with the range of customers and interested parties.

#### CUSTOMER PRODUCT DEVELOPMENT

This line will be shipped back to the research and demonstration centre where DiloGroup will use it for product development and also in cooperation with the customers and their specific fibre and requirements.



Mr. Dell'Orco and Mr. Dilo reported the pleasure of working together © 2023 TexData International

#### “RECYCLOLINE” FOR “GENTLE” RECYCLING

The second highlight of DiloGroup's ITMA demonstration was the introduction to the cooperation with Messrs. Dell'Orco & Villani and Technoplants for “RecycloLine”.

“RecycloLine” is the platform for the three companies involved to engineer and supply complete lines for mechanical recycling of garment waste in order to fulfil current and future requirements to save valuable fibre material instead of wasting, burning and dumping it. DiloSystems as a general contractor will coordinate the engineering of individual projects for our customers worldwide and will be offering demonstration of tearing, aerodynamic web forming, through air bonding, carding, cross lapping, needling as well as air systems engineering which is to control excessive amounts of dust in such production lines. Our engineering will also comprise end-of-line cutting, winding, palletizing and packaging. Our customers will be informed and included in the engineering process in order to decide which method of web forming and consolidation works best for their particular purpose, its quality and economics. Four demonstration locations in Florence, Ancona, Pistoia (all Italy) and Eberbach (Germany) are available to offer a deep insight into this particular technology including sampling of material from recycled fibre.

ITMA attracted also for this field a lot of visitors who have discussed the features of recycling lines in detail with the experts.

[WWW.DILO.DE](http://WWW.DILO.DE)

#### DELL'ORCO LONG SHORT FIBERS

The Italian Dell'Orco&Villani is a family business building textile recycling machinery since 1964. The experience allows them to propose optimal and customized solutions. Dell'Orco&Villani led by their owner and President Sergio Dell'Orco offers various plants for recycling, opening and mini-recycling as well as the corresponding machines. Dell'Orco&Villani presented a complete recycling line on their booth from cutting to baling pressing. The standard textile recycling lines are suitable to open used clothing, tailoring clippings, post production hard waste and hard non woven waste.

The heart of the recycling lines are the tearing machines and here DellOrco offers a technology that allows a particularly gentle treatment of the textile waste, so that the fibers obtained have a length greater than that of comparable systems. The fiber length of recycled fibers is currently the biggest challenge in the further processing of recycled materials, as fibers that are too short do not achieve the desired strength of the yarn or nonwoven fabric. Therefore, a greater length of recovered fibers is a huge benefit that can lead to a reduction in the amount of "new fibers". And, under certain circumstances, it can also mean that certain processes, such as ring spinning, can be technically considered at all.

The latest development here is the Titan - the result of 50 years of experience in recycling textile waste. Mr. Dell'Orco told us that they are really proud of the Titan machine.

Among the most important features of the Titan are the small footprint, computerized control, adjustable distances and feed speeds in working condition, easy access for daily cleaning and maintenance, its compact design and the direct drive motors without transmission chains. The Titan can be combined with the new generation of carding openers to obtain a perfect quality fibres with reduced machinery and less installed power.

The demand for his recycling equipment was very high at the show, and Mr. Dell'Orco told us that this is giving him a headache as to how to keep the customers all happy.

[WWW.DELLORCO-VILLANI.IT](http://WWW.DELLORCO-VILLANI.IT)



Mr. Sergio Dell'Orco in front of a Titan tearing machine © 2023 TexData International



The recycling process starts with a Guillotine cutter © 2023 TexData International

## TRÜTZSCHLER NONWOVENS SHOWED INNOVATIONS FOR SUSTAINABILITY

Trützschler Nonwovens presented a new solution for needle-punching they have developed in close cooperation with the Italian company Texnology. Both have teamed up to create a truly outstanding needle-punching line:

### T-SUPREMA

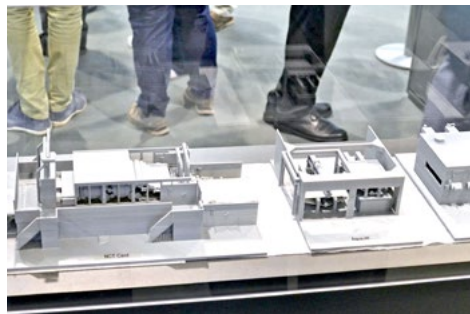
Smart-designed machinery is the basis of T-SUPREMA: On the one hand, Trützschler's Clean Concept (e.g. special sealings, powerful suction, guided air flows) ensures a reliable fiber processing as well as less need for cleaning and maintenance of bale openers, cards etc. On the other hand, Texnology's needlelooms are the most silent, maintenance-friendly, least wear and tear machines in the market due to a design that minimizes vibrations. The machines group to tailor-made production that can serve any application. The T-SUPREMA package is completed by true Trützschler service and T-ONE, an integrated digital working environment for optimizing both performance and ease-of-use.

### NEW OPPORTUNITIES OF PAPER-GRADE PULP

Furthermore, Trützschler Nonwovens and partner Voith demonstrated latest developments in pulp-based CP (Carded-Pulp) and WLS (Wet-Laid/Spunlaced) technologies. They talked about new opportunities of paper-grade pulp as raw material for hydroentangled, biodegradable, single-use nonwovens.



Mrs. Jutta Stehr in front of a model for a Trützschler Nonwovens line © 2023 TexData International



A model of the new T-SUPREMA needle punching line © 2023 TexData International

Last but not least Trützschler Nonwovens introduced the new Modular High-Performance Dryer (MPD) generation for reducing both energy costs and the CO2 footprint. Hydroentangling is an energy-intensive process. At the same time, end products such as spunlaced baby and body wipes are of extraordinary softness, strength and absorbency. The vertical MPD features individual heating systems, occupies up to 40 % less space in cotton and pulp-based nonwoven lines – and reduces energy consumption by up to 10 %.

[WWW.TRUETZSCHLER.COM](http://WWW.TRUETZSCHLER.COM)



TEXNOLOGY presented a nonwoven production line in operation © 2023 TexData International

## TEXNOLOGY SHOWED T-SUPREMA NEEDLERS AND CROSSLAPPERS

Texnology, a market leading manufacturer of textile machinery for nonwovens from Italy, presented the crosslapper and needlelooms of the new T-SUPREMA needle-punching line they have developed in close cooperation with Trützschler Nonwovens. For this purpose, they had set up a complete needling line on the stand, which produced needled nonwovens in operation. This line attracted a large number of visitors during the seven days. Texnology manufactures needle looms, web drafters, profiling systems and is a world leader in high speed crosslapper systems. Depending on the final product, Texnology offers a huge machines portfolio. It includes a total of 6 crosslappers, the largest of which, the X 140 BF, joined to the profiling system X 140 SV F, has a speed of 140 m/min for feeding and 170 m/min for lapping. Two machines are available for needling, the X 1200 UNC

with 1200 rpm and the X1500 SPR with up to 1500 rpm, which are supplemented by 4 pre-needle punching machines. Texnology next generation needle punching machines operate without sliding rods, rocker arms, opposite connection rod or linkages. This configuration allows connecting rods to join and merge in a single gear shaft in connection to only one motor. The needle board movement is therefore not only vertical, but also horizontal, and the needles always tilt in the direction of the material processed when punching in and out the product. The draft is eliminated to near zero. In a single system, elliptical or vertical needling, Texnology obtains both configurations with unparalleled construction and operating simplicity. The machine guarantee a high production capacity and consequently a high stroke frequency and needle density but at the same time they are characterized by reduced maintenance and ensure a low energy consumption.

[WWW.TEXNOLOGY.IT](http://WWW.TEXNOLOGY.IT)



An overview board with the current TEXNOLOGY machine program in front of a needling machine © 2023 TexData International



Victor Matthews informed about latest innovations from Tatham © 2023 TexData International

### TATHAM BELIEVES IN HEMP

Tatham informed about its complete 'Field to Fibre' service for industrial hemp fibre production. Its decortication and cleaning process has a gentle opening action to maintain the fibre length, to make it suitable for subsequent processing. Moreover, Tatham offers staple fibre spinning and nonwoven technologies for manufacturing a wide range of products, while its TS system for drives and controls is suitable for retrofitting to all OEM textile machines, to provide user-friendly control systems with complete synchronisation and significant energy savings. "We are currently fielding a lot of enquiries for technologies for the decortication, fibre opening and fabric forming of hemp," said Tatham director Tim Porritt. "This is being driven by the sustainability of the fibre and concerns over climate change as brands seek solutions to meet their sustainability goals." The Bradford, UK-based company had many fruitful discussions about its machinery for the processing of natural staple fibres.

[WWW.TATHAM-UK.COM](http://WWW.TATHAM-UK.COM)



The new THM & ACM modules can also be retrofitted © 2023 TexData International

### SCHOTT & MEISSNER CONTRIBUTION TO MORE SUSTAINABILITY

Schott & Meissner, one of the global leaders in manufacturing heat-treatment and thermal-bonding lines for the nonwoven and composite Industry, presented two TopConLP (LowPressure) double belt oven. One of them was equipped with a new THM - TwinHeatModule and the other with an new ACM - AirCleanModule. The THM equipped with electrical heaters grant the customer flexibility in production and allow the use of CO2-neutral energy for their production. The ACM is equipped with a continuous filter belt to increase performance of natural fiber processing as well as fibers with high dust content. Furthermore they presented their contribution to more sustainability with alternative heating sources (electric, hydrogen, steam, oil) for all their machinery and the heat recovery system "ERTEC-Series" for belt and drum ovens.

[WWW.SCHOTT-MEISSNER.DE](http://WWW.SCHOTT-MEISSNER.DE)



SICAM machines to process wood pulp © 2023 TexData International

### SICAM BELIEVES IN WOOD

SICAM from Italy manufactures machinery and complete plants for the textile and nonwovens, using its more than half a century experience in this sector. SICAM engineered a proper Wetlaid Forming Unit suitable to process wood pulp as raw material and presented two machines from this line. First was a High Pressure Injector and second a Pulp Forming Headbox. The SICAM wetlaid process finds a perfect combination with the SICAM spun lace process, in order to produce multi-layers nonwovens diversifying end uses, like CP (Carded-Pulp process) or CPC (Carded-Pulp-Carded process). The combination with wood pulp increase the absorbing features of the nonwovens, with advantages in comparison to man-made fibers, considering also sustainability and economical aspects. The main product composition is natural fibers in compliance to the demand for bio-based materials, obtaining also plastic-free solutions, in parallel to traditional wipes.

[WWW.SICAMURL.COM](http://WWW.SICAMURL.COM)



Andritz pre-needler PA.3000 © 2023 TexData International

### ANDRITZ IN THE SPIRIT OF RECYCLING AND DIGITALIZATION

Andritz presented a complete elliptical cylinder pre-needler PA.3000 - the ideal solution for processing fiber mats, featuring new capabilities to "freeze" the evenness of the fabric as it operates with no internal draft and with more than 70% extra surface-impact needling capacity than the existing technology. It is for markets in which the visual aspect of the products is important and that have high productivity requirements. ANDRITZ also presented its ProWin™ technology for profile web weight correction, which is used to optimize fabric evenness and provide a faster return on investment in the needlepunch market segment. By combining ProWid™ and ProDyn™, ProWin™ allows customers to achieve the lowest CV-ratio ever, reaching more demanding markets and saving up to 2% additional fibers compared to ProDyn. Another main topic was the broad range of innovative products and services in the industrial digitalization sector under the brand name Metris.

[WWW.ANDRITZ.COM](http://WWW.ANDRITZ.COM)

### STATE-OF-THE-ART FUTURE TECHNOLOGY FROM MONFORTS

Market leader Monforts, the German manufacturer of machinery for textile finishing, presented the latest developments in various machine segments on a shared booth within the Fongs Group. The ITMA was a good opportunity for the new Managing Director of Monforts, Mr. Gunnar Meyer, to implement his ideas of Monforts' focus on current challenges such as the current energy crisis, alternative heating systems and sustainable textile finishing. In addition, Monforts used the fair to honor special customers.

#### MONTEX@COAT COATING UNIT

Monforts displayed its Montex@Coat coating unit. Over 30 of these machines have been sold worldwide before ITMA, with the majority integrated into some of the thousands of full Monforts Montex stentering lines already in full service. At the ITMA new sales were added. For instance the Montex@Coat unit displayed in Milan was sold to Vietnamese company Thai Tuan during the show. "We were very pleased with the interest in the Montex@Coat, the latest addition to our range of technologies, which we displayed in Milan," told us Nicole Croonenbroek, Marketing Manager at Monforts.

The Montex@Coat can serve a very diverse number of markets and enables full PVC coatings, pigment dyeing or minimal application surface and low penetration treatments, as well as solvent coatings.

Knife coating, roller coating or screen printing can also all be accommodated with this system. As such, it provides the ultimate in flexibility and the ability to switch quickly from one fabric run to the next, without compromising on the economical use of energy or raw materials. Many refinements have been made to the Montex@Coat in the past few years, resulting in higher coating accuracy and the resulting quality of the treated fabrics. A number of advanced new improvements were introduced in Milan, including automatic edge limiters for immediately adapting to new coating widths and a new and simplified hand-held control device. These save considerable time in setting up the machine and ensuring consistent production. A typical integrated Monforts coating line is automated from the inlet feed to the winder and includes weft straightening, the Montex@Coat coating device, Montex TwinAir drying chambers, an Eco Booster heat recovery system and a cooling zone, with visual touchscreen control via the proven Qualitex system and full Teleservice access and as well as the a new and simplified hand-held control device.

#### NEW CHAIN FOR HIGH-TEMPERATURE

Monforts has developed a new chain for high-temperature applications up to 320 degrees, which is lubrication-free and low-maintenance and has already been tested very successfully in long-term use. It was not shown freely accessible.



The Montex@Coat has a new and simplified hand-held control device © 2023 TexData International

#### MANY VISITORS - NUMEROUS DEALS

Monforts has secured a significant number of major orders from textile manufacturers in Central and South America recently, and was very pleased to welcome an unexpectedly high number of visitors from the region to its stand. Among new orders are those for three Montex stenters delivered to the AustralTex Group in Argentina and a further Montex range to denim manufacturer CIT in Brazil. Guatemala's Global Textiles placed an order for its second Montex stenter, while Mexico's Zentrix ordered its third and Avante, also in Mexico, has opted for its sixth. Orders have also been placed for the delivery of three new Montex stenters to one of Pakistan's major corporations, as well as a new Thermex dyeing range to nonwovens manufacturer Orsa in Italy. Monforts Montex stenters for processes such as drying, stretching, heat-setting and coating, she added, are already the industry standard for the fabric finishing industry, providing a number of advantages in terms of production throughput and especially in energy efficiency and resource savings.



The Montex@Coat coating machine on display was equipped with a number of new features including automatic edge limiters for immediately adapting to new coating widths. © 2023 TexData International

## Dyeing, Drying, Finishing

"Visitor footfall at ITMA 2023 was well beyond the company's expectations, and we were especially pleased at the constant number of visitors from South American companies, as well as from Asia and Europe," said Monforts Marketing Manager Nicole Croonenbroek.

Other key technologies in the Monforts portfolio include relaxation dryers, Thermex dyeing ranges and Monfortex compressive shrinking ranges.

### GREEN HYDROGEN FOR THE FUTURE

Furthermore, Monforts organised two very well-attended seminars and discussions on the potential of green hydrogen as a new energy source for textile finishing, drying and related processes at its stand. Monforts is currently leading a consortium of industrial partners and universities in the three-year WasserSTOFF project, launched in November 2022, that is exploring all aspects of this exciting and fast-rising new industrial energy option. The target of the government-funded project is to establish to what extent hydrogen can be used in the future as an alternative heating source for textile finishing processes. This will first involve tests on laboratory equipment to-



full range of MonforClean heat recovery and exhaust air purification technologies. © 2023 Monforts

gether with associated partners and the results will then be transferred to a stenter frame at the Monforts Advanced Technology Center (ATC) in Mönchengladbach.

"Everybody knows that textile finishing is a high energy consuming process," says Monforts Managing Director Gunnar Meyer. "To make this process more efficient, Monforts already offers several solutions, but as a technology leader we are also rising to the challenge of exploring alternative heating options to be ready for the future."

To be considered "green", hydrogen must be produced using a zero-carbon process that is powered by renewable energy sources such as wind or solar. Currently, the cleanest method of hydrogen production is electrolysis, using an electrically-powered electrolyzer to separate water molecules into hydrogen and oxygen. The purity of the hydrogen is also important, and impurities must be removed via a separation process.

"Despite all its advantages, there are obstacles to overcome on the way to widespread, economically-feasible green hydrogen use," explains Monforts Textile Technologies Engineer Jonas Beisel. "Green energy's potential as a clean fuel source is tremendous, but there is much we need to explore when considering its use in the textile finishing processes carried out globally on our industry-leading Monfortex stenter dryers and other machines."

[WWW.MONFORTS.COM](http://WWW.MONFORTS.COM)



THEN SMARTFLOW TSF © 2023 TexData International

### PERFECT ONE-STOP SOLUTIONS BY FONGS

CHTC FONG'S, the only supplier which can provide a complete range of "pre-treatment", dyeing and finishing" equipment, presented a total of four machines from their numerous brands. Fong's new intelligent AI Package Dyeing Machine AIMWIN is equipped with an IFD (Intelligent Fluid Dynamics) system. It has advanced technologies such as High-Efficiency Control, Health Index, AutoPilot, etc., which can bring a totally new technology experience to its customer, Fong's stated.

Also on display was the new THEN SMARTFLOW TSF dyeing machine. The machine's smart fabric transport system ensures extremely even dyeing of the fabric through accurate control of the nozzle pressure and pump power, with movement through the machine via an PLC-controlled plaiting system and variable chamber adjustment depending on fabric characteristics. The machine is equipped with a heat exchanger enabling it to heat the dyeing liquor quickly and efficiently, to reduce energy consumption. Its bath preparation

unit and chemical dosing system ensure accurate and precise dosing of chemicals, dyestuff and salt, reducing chemical waste and optimising results while reducing process times. The Smartflow TSF operates with a low liquor ratio of down to 1:2.5 with full loading of synthetic fabrics.

Furthermore, the new Goller series "MODUL" was shown. It uses a modular design that gives high flexibility for interchanging the function of different modular within a washer.



Fong's AIMWIN © 2023 TexData International

Last but not least, the MONFONGS 888 TwinAir was exhibited. Monfongs new stenter has been equipped with mechanism of "Thermat" and the speed of air circulation motor will be reduced once the fabric is unpinned from the inlet track.

[WWW.FONGS.EU](http://WWW.FONGS.EU)

## SANTEX RIMAR GROUP SCORES WITH GREAT ECO ATTITUDE

SANTEX RIMAR Group exhibited numerous of the latest machines from its portfolio of the individual brands Sperotto Rimar, Santex, Cavitec, Isotex and Solwa. The clear focus was on machines that can improve customers' sustainability with environmentally friendly processes to underline the eco attitude of the company.

In addition to the sustainable qualities of the machines, many of which have the ACIMIT Green Label with the "carbon footprint" declaration, SantexRimar also demonstrated its eco attitude through other aspects: 70% of the materials used for the exhibition stand are recycled, plastic bottles are not used and honey from bees protected by SantexRimar was available as a giveaway.

### NEW HOTMELT LAMINATING MACHINE

The Cavimelt Pro multi-functional coating machine by Cavitec has been presented for the first time. Cavimelt Pro is the new bi-functional hotmelt laminating machine which enables switching between roto-gravure and full-surface coating quickly and easily, thanks to new technology. "We have engaged in countless discussions with customers and potential customers over several years, combining the insights gained with our own experience to design exactly the machines that customers want," stated Stephane Fernandez, Head of Sales and Lab (Hotmelt Division) at Cavitec. Cavimelt Pro offers a carefully thought-through solution, down to the last detail. The gravure roller is easily exchangeable with a smooth transfer roller. The quick-change application head combines gravure and full-surface coating in one single system.

With this, it is possible to change in a few seconds from one coating method to the other, without the use of tools.

### ISOTEX COATING MACHINE

Also on display was the Isotex coating machine that guarantees high precision results. The great flexibility allows for experimenting and/or using sustainable compounds.

### SANTEX ENERGY SAVING CHAMBER (ESC) ENERGY CONSUMPTION DOWN - PRODUCTIVITY UP

Santashrink, the tensionless shrinking and relax drying machine for tubular and open-width knitted fabrics, simply a Santex bestseller, was on show too. For drying SantexRimar highlighted the Santex Energy Saving Chamber (ESC) which is available and can be retrofitted for Santashrink as well as for Santaframe. Installing Santex ESC ahead of Santaframe heating chambers results in energy savings of up to 25% by optimal use of residual heat from the exhaust air, fed into the ESC. As a result, the fabric is preheated without the need for extra heating power. The concept of using the material itself as a heat recovery medium is possible only through the unique solution for evenly distributed heating air and the exhaust air ducting integrated into the heating chamber. Santex stated ESC boosts productivity in finishing by up to 20% and therefore ROI comes within 1.5 year. The resultant fabric displays softer handle and better shrinkage values.



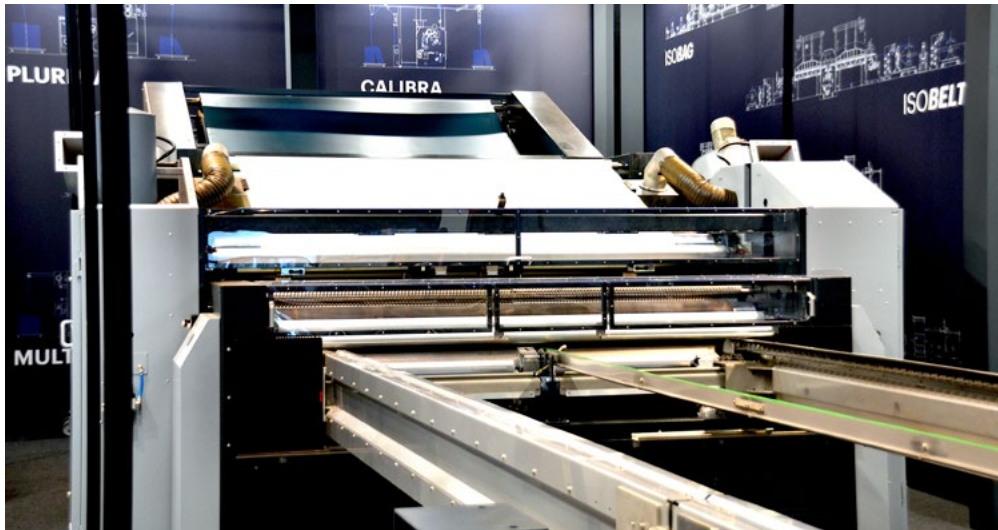
Cavimelt Pro © 2023 TexData International

### COMPAS – THE COMPACTING REVOLUTION

Compas, the new open width compacting and finishing machine for knitted and woven fabrics, was also presented. It embodies the compacting revolution with its unique system which exploits the use of a special belt with specific elasticity values. As water isn't directly sprayed on the compacting belt there's no water absorption by the processed fabric.

### NOVA IS BACK

NOVA by SPEROTTO RIMAR is a continuous de-oiling and scouring machine for textile finishing. It's the ideal solution to get rid of oils and silicons contained in fabrics at loom state and to remove excess unfixed dyestuff and greasy spots after the dyeing process. Although NOVA is already 30 years old, it is currently very much in demand because it offers a closed loop process. This means that there is no air exhaust to the external environment and the process is in compliance with the strict and stringent European environmental regulations and also meets defined standards in the rest of the world.



COMPAS– the compacting revolution © 2023 TexData International



SETEX solutions of the last 30 years  
© 2023 TexData International

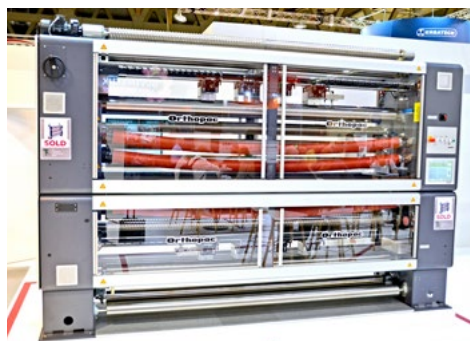
## A LOT OF EXPERIENCE AT SETEX

SETEX impressively presented their 30 years of experience in digitalization and optimization of textile dyeing and finishing. Furthermore, SETEX introduced its integrated turnkey solution for the factory of the future, providing cutting-edge technology designed to maximize production efficiency, resource efficiency and reduce carbon footprint. The visitors could experience the innovative production management system and the energy-saving control technology. The focus was on the symbiosis of SETEX E390 controllers and the OrgaTEX X2 MES platform, which enables a new dimension of data and function exchange.

[WWW.SETEX-GERMANY.COM](http://WWW.SETEX-GERMANY.COM)

## MAHLO IMPROVES KNITWEAR

The German machine builder Mahlo presented the new Orthopac RXVMC straightening machine for the first time. It can remove distortions in textile fabric webs even faster and more precisely. The Orthopac RXVMC therefore shows its full strength when straightening knitwear and distortion-sensitive fabrics. It guarantees higher quality goods and thus less waste.



Mahlo's new Orthopac RXVMC straightening machine  
© 2023 TexData International

"Our new X-Series concept for forward control of knitwear with strong distortions was particularly in focus," said Stephan Kehry, Textile Product Manager. And he added: "The topics of quality, energy saving and return on investment were at the top of the agenda for many visitors". This was accompanied by great interest in data management and data recording. "After the events of the last few years, we could not automatically expect such a large crowd at our stand and at the entire fair", told us Mahlo CEO Rainer Mestermann.

[WWW.MAHLO.COM](http://WWW.MAHLO.COM)

## BIANCALANI AGAIN MEETS NEW MARKET NEEDS

Biancalani, a market leader specializing in sustainable textile finishing machinery from Italy, presented one machine with completely new technical solutions and another that is its best seller with a great innovation. The trade show motto for Biancalani was "We are open", and AQUARIA® represented the slogan perfectly, being an open-width continuous tumble washing range for any kind of cellulose (i.e., cottons, polyester/modal for cupro effect, terry, etc.), denim (for the AQUAFIX and AQUASTONE treatments, that help to cut down cost and save time of subsequent washes and thus save a great amount of water), and for the ECO-BLEACHING treatment, which is an extremely interesting and sustainable alternative to traditional bleaching, both ecologically and economically. In fact, it is possible to do bleaching in a totally green mode with no extra cost. AQUARIA® offers a high production speed up to 80 and a fabric treatment speed up to 600 metres per minute. The great water saving - Zero Water - is enabled by the almost total optimization and recycling of rinse water. So, the water consumption of the washing process corresponds almost exactly to the pick-up that remains on the fabric as it exits the line. Also AIRO®-24 Duetto had a great success, continuous open-width tumbler, for its incredible combination of very high production capacity (practically twice as high



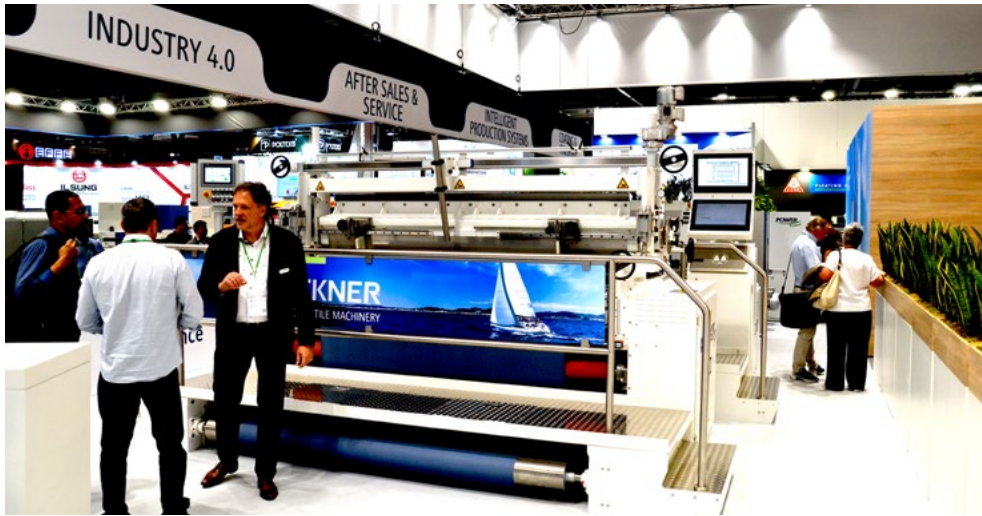
AQUARIA® © 2023 TexData International

as a standard Biancalani tumbler), without compromising the level of quality to which customers of Biancalani machines are used, and extremely small dimensions. One of the features that appealed most to the public who visited the fair in Milan is the convenience of having the entrance and exit on the same side of the machine for additional space savings that are contained besides the double production capacity: there are as many as two AIRO®-24 tumblers in the same space as one. In the follow-up to the fair, Biancalani reported they have met with more than 300 companies including potential and existing customers.

[WWW.BIANCALANI.COM](http://WWW.BIANCALANI.COM)



AIRO®-24 © 2023 TexData International



Next stenter generation POWER-FRAME SFP-4 © 2023 TexData International

### BRÜCKNER PRESENTED MANY PROGRESSIVE SOLUTIONS

The German company Brückner had already attracted attention in the run-up to the ITMA with a number of announcements, as the keywords of the solutions announced sound very much like the future: Industry 4.0 and digital support through a digital twin, alternative heating systems and heat recovery are topics that are intended to drive and change the textile industry. The solutions on display showed that the finishing specialist must have worked hard in recent years to implement these topics and bring them to life. BRÜCKNER presented innovative and trend-setting highlights for textile finishing and coating and presented the next stenter generation POWER-FRAME SFP-4 with many new features.

These include new electric or hydrogen-powered heating systems, intelligent software solutions for optimizing formulas, systems for heat-recovery and exhaust air purification, innovative application systems for chemicals, and newly developed machine concepts. Plus improved insulation and new filter screens.

#### CO<sub>2</sub>-FREE HEATING SYSTEMS

A very important innovation of the BRÜCKNER dryer are without doubt the innovative heating systems. Driven by the energy crisis and the constant focus on energy-efficient solutions, new possibilities to combine different heating media like gas, steam, oil or electricity have been developed. The advantage for customers with combined gas-electric heating, for example, is that they can now switch from gas to electric at the flick

of a switch, depending on what is currently available. In addition, BRÜCKNER also offers burners which can be operated with hydrogen in the future. These combination possibilities allow the textile finisher maximum flexibility in the choice of the energy carrier.

#### NEW SIMULATION TOOL EXPER-TEX

Digital products and services were a big topic. On request, new lines are equipped with various intelligent assistance systems that support the machine operator in finding the optimum machine setting for each process. A special innovation is the new simulation tool Exper-Tex: with the help of artificial intelligence, the desired production process of drying or heat-setting is simulated on the computer. Different scenarios can then be compared with each other: Throughput times, energy consumption, CO<sub>2</sub> footprint and production costs. This innovative system offers customers considerable added value, as it allows accurate pre-calculation of orders, opens up productivity gains and/or energy savings,

and permits "right-first-time production" by means of pre-optimized formulas. Expert knowledge and years of experience in textile finishing are thus available at the push of a button. This tool and much more will be available to customers in the new my-Brückner customer portal in the future.

#### ECO-COAT AND OPTI-COAT 2IN1 FOR THE APPLICATION OF CHEMICALS

The minimum application unit ECO-COAT is a new type of padder with minimum preparation quantity or residual liquor, and a further developed coating unit OPTI-COAT 2in1, which combines the use of floating knife and knife-over-cylinder application in one system. With a high-precision coating cylinder and a perfectly ground coating knife, excellent results can be achieved for paste and foam coatings. In addition, the special design of the unit ensures optimum accessibility for cleaning and maintenance purposes.

[WWW.BRUECKNER-TEXTILE.COM](http://WWW.BRUECKNER-TEXTILE.COM)



Brückner exhibited numerous models of complete lines for a wide range of applications © 2023 TexData International



With Exper-Tex and the digital twin, Brückner is consistently moving towards Industry 4.0 © 2023 TexData International

### INTERSPARE SHOWED KRANTZ SYNCRO FOR HIGHEST FABRIC DURABILITY

"Quality is a decisive factor - also for sustainability", told us iNTERSPARE Managing Director Dirk Polchow. And adds: "The essential requirement of the EU textile strategy is to produce durable textiles. Textiles that are characterised by colour fastness and form stability even after years of use. Textiles that do not end up on waste after a few months. Textiles that are still worn with pleasure even after many washes and years of use. The Syncro stands for the finishing of such durable premium textiles like no other finishing machine."

iNTERSPARE exhibited the Syncro again after 2019 and 2015 and Mr. Polchow told us why: "When we started building completely new lines a few years ago, we deliberately chose the Krantz Syncro, as it has always been considered the best available technology in its field. Today, due to the many installations sold and the still very high interest in the Syncro, we see that it was a good decision. "With the Syncro, we have successfully taken up the tradition of the big names in textile machinery finishing, Artos, Babcock and Krantz, for which we have stood for almost 30 years, and advanced it with our own innovations. That is the simple reason why we are always happy to present it at the ITMA. With all the modifications and improvements, of course."



iNTERSPARE Textilmaschinen Tumble Relax dryer Syncro © 2023 TexData International

### NUMEROUS MODIFICATIONS MAKE THE SYNCRO EVEN BETTER

iNTERSPARE Textilmaschinen has once again raised the energy efficiency of the Syncro to a higher level with a number of innovations. This relates in particular to the use of the latest generation of motors and Lenze inverters. Components from other brand manufacturers, such as the padder used, have been integrated into the control and operation of the Syncro, measuring systems have been expanded and the preparation and storage of data has been optimised by means of a latest-generation router and an expansion of the software.

The visualisation software was also upgraded accordingly and the data is available via an interface. Data can be integrated in a variety of ways or also retrieved via app. All other electrical components are state-of-the-art as well. The automatic filter belt cleaning system with traversing fluff extraction device, was successfully introduced to the market. This eliminates manual operating errors and the resulting blockages, so that the Syncro is continuously operated within the optimum performance range and avoids unnecessary energy consumption.

"The Syncro enables our customers to meet the demands of today and tomorrow far better than their competitors. Better quality fabrics are more sustainable fabrics. That is our message on the booth," said Dirk Polchow.

### KRANTZ SYNCRO APPLICATIONS

The Syncro stands for optimal, variable drying and thermal processes as well as shrink drying processes. It unfolds its full potential particularly in the drying of knitted fabrics, as tubular goods or in cut open form, as well as for light and heavy articles. However, outstanding results are also achieved when drying woven goods. Thanks to the diversity of the Syncro, it is possible to run several narrow or wide strands (single or side by side) without any problems. And several processes, such as drying, shrinking, intermediate drying and effect drying can be done here on just one unit.

### FIRST-CLASS ENERGY EFFICIENCY THANKS TO ECON-AIR

The Econ-Air airflow system (Babcock patent) ensures optimum energy utilisation and avoids energy waste. The air supplied from the infeed slot is heated, directed to the fabric and travels with it through the bays until it is extracted by the exhaust fan at maximum absorbed humidity and replaced by fresh air via the fabric infeed slot. Since fresh air is supplied to the entry compartment and only the optimally moistened air is extracted, all the energy required goes directly into the drying process. The permanent humidity level generated by Econ-Air in the dryer replaces an additional, external steam spraying device. Energy loss to the outside is minimised by design. 3-layer insulation panels and doors prevent heat bridges from the inside to the outside of the insulation.

[WWW.INTERSPARE.COM](http://WWW.INTERSPARE.COM)

## Dyeing, Drying, Finishing

### **BENNINGER OFFERS AN ALMOST COMPLETE RANGE OF SOLUTIONS IN DYEING AND FINISHING**

Benninger aims to become the complete system supplier with leading technology for continuous wet processing, discontinuous dyeing and remain the leader for solutions for the tire cord industry. Benninger supplies overall solutions for all important textile wet finishing processes, and they specialize in the continuous open-width treatment of woven and knitted fabrics, technical textiles as well as jet dyeing machines, jiggers, along with the complete and integrated dye house supply systems such as liquid dispensing, salt and soda ash distributing systems as well as dye staff distribution systems. The portfolio also includes caustic soda recovery plants and

waste-water heat recovery systems. From this large portfolio, Benninger presented 4 new and quite different state-of-art-machines machines, also to underline the new positioning with an almost complete range of solutions in the field of dyeing and finishing. They were introduced to us by Mr. Rolf Erik Schoeler, CSO Benninger Group.

#### **NEW FABRICMASTER FOR DISCONTINUOUS DYEING**

With the FabricMaster Benninger has produced a very fast, versatile, and economic Jet dyeing machine which ensures dramatically shorter process times. It operates by extremely low energy consumption and works at lower liquor ratio than other machines. Customers have decided for FabricMaster due to the ability to dye difficult Lycra blends of Cotton, Rayon, Nylon and Modal fabrics in open width

form without any rope marks or edge curling. Less ballooning with tubular fabric is an other advantage of the low fabric lifting. Furthermore, the FabricMaster is a very sustainable machine and on the road to zero footprints. It stands for 40% less water consumption, 30% less energy consumption and 30% less chemical consumption than comparable machines.

#### **SALT-FREE DYEING OF WOVEN FABRICS AND KNITWEAR**

The second machine on display was the CPB system for Salt-free dyeing. The heart of the system is the BENNINGER KÜSTERS DYPAD with two floating rollers which has been a safe and reliable partner in the piece dyeing sector for decades. The CPB system offers minimum production costs, a high fixation rate and is also suitable for short lots.



Mr. Rolf Erik Schoeler, CSO Benninger Group, in front of the CPB system © 2023 TexData International

#### **BRAND NEW SINGEING MACHINE “SINGERAY”**

The “100% made in Germany” singeing machine is equipped with 2 burners and a double nozzle strip. The silicium carbide burning chambers ensure complete combustion, and a constant burner temperature thanks to four cooling channels. The machine has two or three features and construction advantages that make it different and better. One is the way the perfect flame is generated and the intensity is conserved by the type of nozzle strips. Both ensure that the singeing is better. Secondly, it uses less gas. And the third one, there is no clogging. The SingeRay was introduced in India at the end of 2022 and is a great success. With 8 planned, more than 20 have already been sold.

#### **UPGRADE FOR CDS**

Last, but not least Benninger introduced the new chemical dispensing system, CDS. It serves all kind of discontinuous and continuous machines in an accurate and fast way. Up to 24 chemicals can be connected up to 16 machines. Compared to manual work, such a system is of course a quantum leap. It guarantees uniformity and provides transparency. It also improves occupational health and safety.



Benninger Fabricmaster © 2023 TexData International

Benninger SingeRay  
© 2023 TexData International

[WWW.BENNINGERGROUP.COM](http://WWW.BENNINGERGROUP.COM)



Thies Signature © 2023 TexData International

## THIES NEW SIGNATURE SERIES IS A MILESTONE IN SUSTAINABILITY IN TEXTILE DYEING

For the first time, Thies presented the Signature Series and opened a new chapter in fabric coloration. The Thies people are confident the Signature Series will prove to be both disruptive and seamless. After years of research and development, Thies says Signature technology is changing dyeing as we know it, but is ready for existing dye houses to use immediately. With its novel ability to precisely dose concentrated chemistries and flexibly use less water to transport fabric, the Signature Series is capable of delivering highly consistent results with liquor ratios starting at 1:2.3 liter of water per 1 kg of fabric.

Proven in bulk production, water consumption is tremendously reduced, dyeing uniformity is improved and batch times are shorter. Signature's ultra-low liquor ratio has further multiple cost and environmental benefits. Dye consumption is reduced up to 20 % while achieving the same shade, less energy is required for heating water, and the treatment of water is less costly because the total dissolved solids (TDS) is reduced up to 50 %. In short, the Signature Series has the proven advantages of batch dyeing while competing with the low liquor ratio of single-pass applications. The ease with which Signature technology fits into existing production lines means payback on investment starts on day one.

[WWW.THIESTEXTILMASCHINEN.COM](http://WWW.THIESTEXTILMASCHINEN.COM)

## INDUSTRY 4.0. BY SEDO TREEPOINT

Sedo Treepoint showcased the latest control systems of the Sedomat 8000 and 6007 series and newest software solutions. In addition to the latest innovative jet and yarn software, visitors learned how they can increase their level of automation with the ColorMasterConnect or TEXconnect software solutions and how the controls can bring their application to the highest standard and thus boost their productions to a new level. The new Sedomat 8000 series was developed for such smart factory applications and has all the advantages of the established Sedomat controllers. The focus of the control series was also on the latest member of the Sedomat 6007 series: The Sedomat 6007 series is a cost-effective option with a high level of automation that offers many flexible internal I/O options. For example, an integrated PLC is already included in the attractive alternative. A wide variety of requirements from yarn, piece and other dyeing machines can additionally be realized via optional internal and external in- and outputs. Last, but not least there were two new software systems, which show innovative application possibilities for Industry 4.0. TEXconnect, as a cloud-based platform for the textile industry is easy to set up and offers the most common functions of our on-site "master" systems at a low investment cost. In addition, ColorMasterConnect, as a web-based color management software, allows users to use it on any device and on different operating systems.



The Sedomat 8000 series offers the most advanced machine control technologies. © 2023 TexData International



TEXconnect is a cloud-based platform offering a wide range of MES features for the complete textile manufacturing chain. It is easy to set up and provides the most common functionalities of our on-premise "Master" systems at a limited investment. © 2023 TexData International

## SEDO ENGINEERING SMART INDIGO

Sister company SEDO ENGINEERING presented its Smart-Indigo™ system at the booth. Smart-Indigo™ makes the difference for the denim world by using electricity instead of chemicals. The most sustainable way to dye denim offers a liquid-indigo production where the only waste product is oxygen! The use of electricity instead of chemicals results in a chemical-free process emitting 90% less CO<sub>2</sub>, consuming 70% less energy and 30% less water.

[WWW.SEDO-TREEPOINT.COM](http://WWW.SEDO-TREEPOINT.COM)  
[WWW.SMARTINDIGO.COM](http://WWW.SMARTINDIGO.COM)

## TECNORAMA HIGHLIGHTED NEW INTEGRATION WITH DOS&DYE

Tecnorama, leader in the automation of dyeing laboratories, highlighted a combination of a DosoramaMaster and a Dyrama 4R/1000 dyeing machine. This solution is perfectly integrated with the patented Dos&Dye system, which makes it possible to obtain an exact recipe that can be replicated in large-scale machines. This drastically reduces production corrections and re-dyeing, resulting in significant time savings and productivity gains. The special feature of the presented solution is that it can dye one bobbin of yarn of up to 1kg each. Each individual autoclave is controlled by its own program, making it completely independent from the others. A perfect machine to automate the laboratory and make the study of colors for large productions faster and more accurate. The Dos&Dye@ 6000 Just in Time system for dyeing small batches, which has already been chosen by well-known internationally recognized companies, also met with a great response.

[WWW.TECNORAMA.IT](http://WWW.TECNORAMA.IT)



DosoramaMaster © 2023 TexData International



Pulsar on the Loris Bellini stand © 2023 TexData International

## LORIS BELLINI PRESENTED YARN DYEING FOR A SUSTAINABLE FUTURE

Loris Bellini, the Italian company specialised in designing and manufacturing of complete plants, offers a wide range of machines for the dyeing and drying of yarn (packages or hanks), loose fibre, tops, tow and warp beams. On the booth they highlighted again the PULSAR machine, the innovative system for the dyeing of packages, tops and small warp beams. "Pulsar is our most advanced system which guarantees enormous savings of electric energy, water and steam for a more sustainable future", explained Sales Director Mr. Luca Formenteri. Pulsar takes advantage from a completely reengineered hydraulic circuit, which divides the base plate of the dyeing carrier in three different sectors. By means of dedicated butterfly valves, liquor circulates through them at pre-set intervals marked by the dedicated software. Combined with a specific mixer (Thermocolormix) installed in the lower portion of the main kier, it brings unprecedented savings, such as 70% less electric energy and nearly 30% less water (LR 1:4).

[WWW.LORISBELLINI.COM](http://WWW.LORISBELLINI.COM)

## RAISING AND EMERIZING FLEXIBILITY WITH XETMA

XETMA VOLLENWEBER, which have been synonymous with exceptional and innovative solutions in the field of raising since 1853, presented the MULTISYSTEM XRE, a versatile machine that met with great interest. From the XRE, the R stands for "Raising" and the E for "EMERIZING", because this machine offers both processes as well as a combination of both processing methods and thus makes 3 technologies usable in one machine. The drum is equipped with 12 raising and 12 emerizing rollers in



XETMA MULTISYSTEM XRE © 2023 TexData International

pairs and additionally 12 further raising or emerizing rollers in a stand-by position. It offers automatic re-setting between raising and combined raising and emerizing in less than 4 minutes by touch screen. The fabric speed is between 5-60m/min and the drum rpm is 25-100 rpm. Nominal widths are from 1800 mm to 2600 mm with corresponding working widths from 1700 mm to 2500 mm.

[WWW.XETMA.COM](http://WWW.XETMA.COM)

## BIANCO WITH WIDE RANGE OF SUSTAINABLE INNOVATIONS

Bianco from Italy will celebrate 50 years in business in 2024. They presented a large number of state of the art textile machines allow them to reduce environmental impact without sacrificing fabric quality. The Bianco Rope Opener & Slitting line is used for the slitting and opening of knitted and woven fabrics - both tubular or open-width - after bleaching, washing, dyeing and reprocessing. The Bianco Reverse Slitter is ideal for rope tubular fabric from rope coming from trolley or from small rolls, both for wet and dry fabrics. The reverse basket allows a reduction of the overall dimensions of the machine and consequently of the tension exerted on the fabric. The TNK Washing Tank for Enzymatic Waste is designed to clean fabric after enzymatic treatments. Installed at the inlet of the squeezing padder in slitting lines, rope openers and stenter inlets.

[WWW.BIANCO-SPA.COM](http://WWW.BIANCO-SPA.COM)



Bianco padder © 2023 TexData International

## PROVEN AND BRAND NEW BY ERBATECH

Erbatech, a German member of the Vandewiele Group from Erba, presented an example from its Scout Foulard series. Erbatech foulards are made for the most precise impregnation with as little chemical waste as possible. With many different solutions to choose from, depending on customer requirements, a SCOUT FOULARD can be equipped with traditional crowned rollers, center-supported rollers or S-rollers. For synthetic fabric applications an integrated vacuum system is also available. The foulards are controlled with the latest process control technology and can be made part of any finishing line for wet-on-wet or dry-on-wet applications. Furthermore, they presented a new singeing machine developed together with BEJIMAC which combines the best of 2 worlds with an expert in knitwear finishing and an expert in singeing.

[WWW.ERBATECH.COM](http://WWW.ERBATECH.COM)



Erbatech Scout Color Foulard  
© 2023 TexData International

## ICOMATEX PRESENTED INNOVATIONS FOR OPTIMIZED USE OF ENERGY

ICOMATEX, manufacturer of stenters, relax dryers, coating lines, steamers, polymerizers, vacuum units, washing lines and continuous bleaching ranges from Spain, showed its newest developments. These include an electrical heated stenter, a heat recovery unit, coating, smoke filtration and digital solutions. The absolute eye-catcher was certainly the exhibited stenter frame, which was branded with 100% electrical heating and also presented a huge heat recovery system on top.



100% electric stenter shown by ICOMATEX  
© 2023 TexData International

Furthermore, they demonstrated its digital solution ICOSMART. It will be integrated on most of ICOMATEX new machines. Customers can now track their production, calculate the energy spent on each job, trace their orders and a lot of other data.

[WWW.ICOMATEX.COM](http://WWW.ICOMATEX.COM)

## BALDWIN SHOWED HOW TO “FINISH WITH PERFECTION”

Baldwin Technology presented its TexCoat™ G4 precision spray finishing system, eliminating chemistry waste on changeover, saving water, and achieving faster speeds. In operation, the TexCoat™ uses a precision spray application system to evenly apply water or chemistries to one or both sides of a moving web roll of fabric or other material, using an application system that spans the width of the web with evenly spaced spray nozzles.



Baldwin TexCoat™ G4 precision spray finishing system  
© 2023 TexData International

This “non-contact” method of applying liquids to surfaces is highly efficient and eco-friendly, because the minimum required amount of water or chemistries can be used. TexCoat G4 processes a wide range of low-viscosity water-based chemicals, such as durable water-repellants including PFAS-free, softeners, anti-microbials, easy-care and flame retardants, etc.. The company's technology uses the same chemicals as found in traditional pad baths with no special auxiliaries required.

[WWW.BALDWINTECH.COM](http://WWW.BALDWINTECH.COM)

## ERHARDT + LEIMER (E+L) INTRODUCED SEVERAL INSPECTION TECHNOLOGIES

E+L, leader in the field of automation technology and also with inspection technologies, presented a seam sensor for detecting cross seams, a warp thread sensor and a metal detector that can be used to optimize production processes and make them safer. In addition they showed a newly developed web cleaning system. The seam sensor marketed as ELSEAMTEX SI 1001 detects, optically and therefore without contact, any type of seam on printed or single-color fabrics. Especially when there are large differences in thickness, such as with carpets and towels, no adjustment work is necessary. Software based on artificial intelligence makes it possible for the first time to detect cross-seams at the level of human perception. The metal detector ELMETA MDA 1005 / 1006 reliably and accurately detects the smallest metal particles over the entire width of the web.

[WWW.ERHARDT-LEIMER.COM](http://WWW.ERHARDT-LEIMER.COM)



E+L seam sensor ELSEAMTEX SI 1001  
© 2023 TexData International

## KORNIT SHOWCASED SOLUTIONS FOR DIGITAL PRODUCTION ON DEMAND

Kornit, a worldwide market leader in sustainable, on-demand digital fashion and textile production technologies, highlighted the game-changing Kornit Apollo platform – offering the ultimate in high-throughput digital production at scale. Enabling digital production to go mainstream, Apollo allows customers to become more agile, drive revenue opportunities, shift to localized production, and ease complex workflow processes. It offers large-capacity and high-quality-driven players the opportunity to adopt digital versatility and a quick time to market – expanding beyond screen printing to achieve vertical or horizontal expansion and robust business opportunities based on current operational models.

The Apollo platform is built on field-proven and industry leading Kornit MAX technology and is the most comprehensive, streamlined single-step solution for near-shore short- and medium- run apparel dec-



High interest for the kornit Atlas Max Plus  
© 2023 TexData International



Unveiled at ITMA 23: The new Kornit Apollo © 2023 TexData International

oration. Empowering customers to sidestep the hazards of complex supply chains, it also offers unmatched speed and agility in digital decoration – designed from the ground up to decorate 400 unique garments per hour. Automated loading and unloading, integrated smart curing, and inline garment type adjustment yield higher output and reduced labor for optimized profitability. “The fashion and textile industry has remained at a crossroads – aware of its limitations but lacking a clear solution for moving from wasteful, inefficient production models,” said Ronen Samuel, Chief Executive Officer at Kornit Digital. “Offering a true platform for agile, high-throughput digital production on demand, Apollo transforms what apparel producers and brands can do.”

### DECORATED APPAREL AND FABRIC

The Company also introduced the Kornit Atlas MAX PLUS system for decorated apparel. It takes Kornit’s proven Atlas MAX platform to the next level, bringing increased productivity of 150 garments per hour.



Kornit Digital CEO Ronen Samuel presenting the new Apollo © 2023 TexData International

With integrated Smart Curing, Rapid Size Shifter pallets, and autonomous calibration, the offering takes smart production capabilities a step forward introducing production flexibility, consistency, and the highest quality available. Furthermore, Kornit enhanced the Presto MAX system for digital fabric decoration on demand. Designed with the fashion and home décor industry in mind, the enhanced solution presents breakthrough capabilities for transforming virtual concepts into brilliant custom fabrics.

[WWW.KORNIT.COM](http://WWW.KORNIT.COM)



Epson Monna Lisa ML-32000 340 offers double-sided printing up to 340cm © 2023 TexData International

## A BRIDGE TOWARDS SUSTAINABILITY BY EPSON

Epson presented all the benefits of its Monna Lisa series and demonstrated how Epson’s increasingly flexible and sustainable technology address the latest market trends. Visitors were able to see the 5 different ML printers, including the ML-8000, an 8-head Direct-to-Fabric digital printer to approach the textile printing business, the ML-16000HY and the impressive ML-24000, the 24-head Direct-to-Fabric digital printer developed with flexibility and sustainability in mind and also the ML printer with 24 heads.

Highlight was the revolutionary Monna Lisa ML-16000/HY, a 16-head Direct-to-Fabric hybrid digital printer, that can uniquely digitally create any type of special effect on any kind of fabrics. Its Genesta water-based inks guarantee colour accuracy and resistance in fabric prints, while pastes developed and produced by Epson Como Printing Technologies create the special effects.

[WWW.EPSON.EU](http://WWW.EPSON.EU)

## SPGPRINTS SHOWED "NATURE"

SPGPrints presented innovations in both rotary screen printing and digital printing. It was also very important to SPGPrints to act sustainably and leave a small ecological footprint, as well as having a 100% renewable stand. Anchoring sustainability and with the new slogan "Printing tomorrow", they decided to replace all product names with names that come from nature. Javelin was changed to Magnolia. Four new printers were added to the portfolio.



SPGPrints rotary screen printing machine MAPLE  
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Jasmine and Magnolia are direct-to-fabric systems. Jasmine with Kyocera print head focuses on maximum productivity with optimal 600 dpi print quality and is available for reactive, acid and pigment printing versions. Magnolia, with its true 1200 dpi and Archer+ technology, stands for the highest print quality. In industrial sublimation paper printing, a new segment for SPGPrints, the Rose machine was launched with Epson 3200S printheads. Rose is a roll-to-roll paper sublimation system with a peak productivity of up to 720 m<sup>2</sup>/h and offers variable ink droplet size and a maximum resolution of 1200 dpi for outstanding print quality.

[WWW.SPGRINTS.COM](http://WWW.SPGRINTS.COM)



Mimaki Tiger 600-1800TS © 2023 TexData International

## MIMAKI PRESENTED A NEW TIGER AND TWO GAME CHANGING PROCESSES

Mimaki launched the most productive Tiger600-1800TS Dye Sublimation Printer and introduced two revolutionary technologies: a textile pigment transfer printing System and the Neo-Chromato process.

The Textile Pigment Transfer Printing System minimises water usage and simplifies the printing workflow. It comprises three essential elements: the textile pigment ink, the transfer system and the textile Pigment transfer paper, Texcol®. This is a revolutionary transfer paper pioneered by Dutch paper manufacturer, Coldenhove, that allows for transferring a digital print using an environmentally friendly 3-step transfer process to create a vibrant application on a wide range of materials, including natural fibres. The design is initially printed onto the paper using a customised TS330-1600.

The Neo-Chromato Process, a world first in cyclical textile technology, allows re-use of previously dyed polyester textiles. It tackles the issue of the enormous amount of polyester waste head on by utilizing a discolouring technology for dye sublimation inks.

The Tiger600-1800TS boasts a maximum printing speed of 550 m<sup>2</sup>/h (143% faster than the previous model) owing to the renovated high-speed printhead and Mimaki's proprietary image quality enhancement technologies. Ideal for environmentally conscious businesses, its waterless printing technology and OEKO-TEX® and bluesign®\* approved inks set new eco-friendly standards to minimise environmental impact. And with its user-friendly operation interface, the Tiger suits all skill levels for a smooth printing experience. The size has also been halved, with the paper mounting and winding system both located at the back. This smaller footprint enables customers to easily install multiple units to meet fluctuating demand, whilst also increasing overall production capacity.

For continued productivity the Tiger 600-1800TS comes packed with Mimaki Core Technologies, ensuring top-notch print quality and maximum productivity without production hiccups. These are the Nozzle Recovery System (NRS) to substitute clogged nozzles, the Mimaki Degassing Module (MDM) to remove air from the ink channel, the Automatic Cleaning Function to keep the print head clean, the Jam Sensor to prevent print head damage and the new wrinkle-removing rollers, which handles varying paper thickness to prevent the cockling effect. For quality printing the Tiger offers the Mimaki Advanced Pass System (MAPS4) to reduce banding, the Waveform Control (WFC) for best possible image sharpness and the Variable Dots Technology (VDT) for smoother gradations.

[WWW.MIMAKIEUROPE.COM](http://WWW.MIMAKIEUROPE.COM)

## PRE-TREATMENT OF THE FABRIC IN LINE BY ALEPH

aleph debuted the brand-new LAFORTE 400 Fabric H, a hybrid model that enables to perform the pre-treatment of the fabric in line. It is equipped with extra special printheads engineered to complete the pre-treatment of the fabric, just before the actual printing. This enables to achieve the highest speed of 480 sqm/h and an easy-to-handle three-step processing. The printer utilises aleph' GOTS certified pigment inks for improved sustainability. Furthermore, aleph highlighted the company's top-of-the-range solution LAFORTE 600 Paper, one the fastest industrial printers in the sublimation fashion market, achieving a speed of up to 1,000 sqm/h. This printer is equipped with the company's ECO PASSPORT by OEKO-TEX® certified sublimation inks and powerful proprietary vacuum transport system that eradicates the use of glues, while also enabling to print on sublimation paper from 25 gsm. The showcased model featured 4 mirrored colours +2 mirrored light colours, resulting in improved quality, enhanced efficiency, and a cost-effective printing process on polyester fabric.

[WWW.ALEPHTEAM.COM](http://WWW.ALEPHTEAM.COM)



aleph LAFORTE 400  
© 2023 TexData International

## EARTH SUSTAINABLE SOLUTIONS

### BY COLORJET

Smt. Darshana Jardosh, Hon'ble Union State Minister of Textiles & Railways along with Mr. Rohit Kansal (Additional Secretary in the Ministry of Textiles) and Dr. Neena Malhotra, Ambassador of India to the Republic of Italy, inaugurated the ColorJet Pavilion. ColorJet, the fastest growing wide format digital inkjet print technology leader in the Indian sub-continent and ITMA Platinum sponsor, launched "Earth Sustainable Solutions" and presented four printers: EARTH32, EARTH ECO16, METRO NXT and Sublixpress Plus. The METRO NXT has a great production capability of up to 9,000 sqm/day. It comes with upto 32 industrial grade Kyocera Print Heads and delivers sharp quality output using ColorJet recommended inks available in the configuration of 8 Colors options. The METRO NXT offers ColorJet's latest technology like Efficient Ink Supply System, Head Crash Protective System, Linear Motor, Gold Plated Metal Encoder, Modular Feeding System, On Demand Capping & Wiping System using HMI Screen and the 5 Stages Water Efficient Belt Cleaning System.

[WWW.COLORJETGROUP.COM](http://WWW.COLORJETGROUP.COM)



ColorJet METRO NXT © 2023 TexData International



EFI Reggiani HYPER © 2023 TexData International

## EFI REGGIANI SHOWED MOVE TO DIGITAL ON-DEMAND WORKFLOWS

EFI™ Reggiani showcased its market-leading textile solutions. The ecoTERRA is an all-in-one solution for water-based pigment printing that requires no ancillary equipment for pre- and post-treatment, significantly reducing water, energy and chemicals consumption in the overall process. EFI Reggiani showed its full ecoTERRA line up of four models, including a 340 printing width, with speeds ranging from 150 to 600 sqm/hour. The HYPER is a scan digital textile printer and available in 1.8-, 2.4- or 3.4-metre-wide models. It is equipped with 72 printheads and ink recirculation up to the nozzle plate. It can print two pass, production quality at speeds up to 13 linear metres per minute on a 1.5-metre-wide roll. Using the dual-roll capability, users can achieve throughput speeds up to 20 metres per minute. The new EFI Reggiani BOLT XS printer, with speeds up to 100 linear metres per minute, boosted uptime and reliability, high performance throughout, unparalleled printing accuracy, and minimal maintenance needs, is a true digital replacement for rotary printing.

[WWW.EFI.COM](http://WWW.EFI.COM)



MS Heritage © 2023 TexData International

## THE FUTURE OF PIGMENT AND SINGLE PASS BY MS & JK

MS Printing Solutions presented no less than "the future of pigment". The solution components are the JP7 digital scanning printing machine which has been completely re-engineered, the Digistar Pigment 4K new patent pending pigment ink by JK Group and a new colorimetry software. MS announced a couple of advantages. The process is very sustainable and offers water, energy, and chemical reduction of 95% if compared to the same digital printing process with reactive ink. The new ink eliminates the need for pre- and post-treatment, reducing production steps by 50%. Thanks to the complete and inline printing system consisting of machine and dryer on demand printing is supported. Future of single pass should be the exhibited MS Heritage line with MS MINILARIO because of the productivity in combination with compactness. 20 MINILARIO were sold to customers by the time of the trade fair. Another MS news is they are supplying artificial intelligence for textile printing for the first time. They have a patent pending system which detects printing errors automatically and immediately.

[WWW.MSITALY.COM](http://WWW.MSITALY.COM)

## LATEST COLARIS BY ZIMMER AUSTRIA

ZIMMER AUSTRIA presented the latest COLARIS Digital inkjet printer with Vision camera detection system and the STR System Wenk Rotary Screen Stripping and Ironing Machine. Additionally, several models of coating and screen-printing lines, along with different rotary screen printing heads and squeegee devices were on display. The introduction of the new COLARIS printer generation with up to 16 color groups was a highlight. Not only the option for 16 colors but also the possibility to operate the printer with multiple ink families have been a novum presented. It comes with the Seiko RC1536 printhead generation with lower energy consumption. The open ink system philosophy is continued as it offers the customer to choose from a wide range of certified ink suppliers which helps to reduce ink costs and be free from supply constraints. A newly designed ink circulation system without need for a vacuum ensures a stable print run and high-quality print results. The Solaris is generally used for the production of very special textiles in the fields of technical textiles, military camouflage prints with IRR control, transportation fabrics and various carpet flooring products.

[WWW.ZIMMER-AUSTRIA.COM](http://WWW.ZIMMER-AUSTRIA.COM)



Colaris Printer on the show © 2023 TexData International

## “SEE THE POTENTIAL” WITH KONICA MINOLTA

Konica Minolta Textile demonstrated the capabilities of the consolidated and appreciated Nassenger 8. It is a printing machine with in-line pretreatment technology, already announced during the last edition of ITM in Istanbul. Its technology enables an immediate printing, without pre-treatment of the fabric: it reduces the waste of water, speeds up the process and saves money and resources.

The spotlights was on AccurioTex 700, the first digital textile machine of the Japanese company. It is equipped with a sublimation technology on transfer paper and 16 Konica Minolta 1024 nozzle printheads. Print speeds is up to 190 m2/hr in draft mode and 50 m2/hr in the top quality mode (720 x 720 dpi). The Variable Drop technology ensures a better print resolution and color brilliance. It is a flexible, durable, reliable system that can be customized to the specific needs of its market. This enables agile production processes and cost savings without compromising the output quality.



The new Konica Minolta AccurioTex 700  
© 2023 TexData International



Konica Minolta sample printed with ViROBE ink  
© 2023 TexData International

Furthermore, Konica Minolta announced a new ink system that enables higher energy-and-water savings. The new concept allows to skip the production processes dedicated to washing and steaming, eliminating water consumption and reducing CO2 emissions by 89%. The new ink named ViROBE is-eco-friendly and provides flexibility. Printing on a wide range on substrates is possible. Samples of fabrics printed with this new technology have been shown on the booth. For usage of reactive ink, Konica Minolta offers an in-line pretreatment ink which eliminates the need for pre-treatment.

And last but not least Konica Minolta has updated its MAESTRO software to make it more convenient and automatic. The new version can now communicate with the customers database. All this was exhibited under the concept "SEE THE POTENTIAL", an invitation to continue on the path of improvement.

[WWW.KONICAMINOLTA.IT](http://WWW.KONICAMINOLTA.IT)

## KYOCERA UNVEILED WATER-FREE DIGITAL PRINTER FOREARTH

Kyocera unveiled FOREARTH, its debut inkjet textile printer, that aims to eliminate virtually all water usage from fabric printing. Kyocera Deputy General Manager, Commercial and Industrial Printing Solutions Division, Sho Taniguchi, said: " We expect this printer to contribute to eliminating printing-related water pollution, which has long been an issue in the textile and apparel industries." The FOREARTH comes with the "Triple FREE" concept containing "Water-Free", "Creative Free" and "Location Free".

### WATER-FREE

In general, textile printing uses dye ink and requires a large amount of water for the pre and post-treatment processes, such as steaming and washing. FOREARTH is an All-in-One printing system that uses new proprietary pigment ink, pre-treatment liquid, and finishing agent, which are constantly discharged in the same sequence from the inkjet head. This system eliminates the pre-and post-processes required of conventional dye printing and reduces the water consumption of textile printing by 99%. Also, this new printing solution contributes to reducing energy consumption and CO2 emissions because it does not need large-scale equipment.

### CREATIVE FREE

Conventional dye digital printing generally requires different types of dyes for various fabrics made from different fibers.

FOREARTH solves the typical problems of pigment printing, such as less color development, fastness, and hard hand-feel, by using Kyocera's proprietary ink technology and knowledge in a new, All-in-One printing system. This enables highly detailed printing on diverse fabrics ranging from cotton, silk, and polyester to nylon and blended fabrics with a single machine.

### LOCATION FREE

FOREARTH needs only a small amount of water for printing, so the production site can be located anywhere, , such as on-shore, near-shore, or in more suitable areas, like places close to consumers.

[WWW.KYOCERADOCUMENTSOLUTIONS.COM](http://WWW.KYOCERADOCUMENTSOLUTIONS.COM)



Sho Taniguchi (left) and team presenting the FOREARTH  
© 2023 TexData International



Kyocera FOREARTH in action  
© 2023 TexData International

## OPC UA IOT PROJECT BY LENZING INSTRUMENTS

Lenzing Instruments highlighted the DTI 600 tester for fully automated draw tension measurement for determination of the regularity of the molecular orientation on the running yarn. It is especially designed for production control and standardized according to ASTM D 5344. With DTI 600, it is possible to predict the yarn's behaviour in texturing, drawing and dyeing processes. By measuring the draw elongation, the yarn's thermal shrinkage at a certain pretension is analysed. The DTI 600 was connected to the SESS 108 /24, a management system which organizes the concerted operation of the automated filament testing instrument. In addition, they showed a first demo project using the "Open Platform Communications Unified Architecture", the standardized communication protocol developed for applications in industrial automation and the Internet of Things (IoT). Lenzing Instruments is a member of the Umati community, which is driving this standard forward. The networking of different systems requires such a standard and OPC UA is also supported by the VDMA.

[WWW.LENZING-INSTRUMENTS.COM](http://WWW.LENZING-INSTRUMENTS.COM)



Lenzing Instruments SESS 108 and DTI 600 © 2023 TexData International



Marcus Hardelauf, Textechno General Sales Manager, presented DYNATENS © 2023 TexData International

## WEAK SPOTS AND RECYCLED YARNS IN THE SPOTLIGHT OF TEXTECHNO

TexTechno showed its full range of instruments including its latest developments of testing technology for man-made, natural and recycling fibres, filament and spun yarns as well as composites. Highlight was the new DYNATENS, a dynamic tensile tester dedicated to the detection and characterization of weak spots in staple fiber yarns. The instrument continuously subjects the tested yarn with an increasing amount of stretch resulting in up to 12 yarn breaks per second at yarn feeding speeds of up to 800 m/min. Additionally, almost the full length of the yarn (>90%) which is passed into the instrument is checked. In this way, no weak spot is overlooked which corresponds to highest testing efficiency. Furthermore, TexTechno showed several solutions for testing recycled fibers including FIBROTEST/OPTPTEST /FIBROFLOW and MDTA 4.

[WWW.TEXTECHNO.COM](http://WWW.TEXTECHNO.COM)



DancingBox 420 © 2023 TexData International

## JEANOLOGIA SHOWS INSIGHTS INTO THE FUTURE OF BLUE JEANS

Jeanologia showcased new technologies and operational models to accelerate the sustainable transformation of the textile industry, reducing costs, and improving agility and productivity, while preserving product authenticity and performance. The leading company in the development of eco-efficient technologies demonstrated how it reduces the use of water to the minimum in order to age garments naturally using air with its revolutionary Atmos atmosphere washing. A new milestone achieved thanks to its G2 ozone technology and its INDRA patented system that eschews the use of water, chemicals and pumice stones to achieve an authentic vintage look.

Jeanologia's eco-efficient DancingBox 420 high-speed water washer was also on display. Thanks to its patented system, it attains better product abrasion in less time and with less water, achieving higher productivity, while improving the performance of e-Flow, its technology based on air nanobubbles to transport chemicals to the garment instead of water.



Handman © 2023 TexData International

In the field of laser technology, the Spanish company exhibited two technologies. One with maximum flexibility, the other robot-supported and automated for maximum productivity in uniform mass processing. Jeanologia defines this technology, which it has named Handman, as the future of the Blue Jeans industry where robots and humans work together and the only way to attain clean and totally scalable production, with reduced costs, greater agility, and a better production look. With Handman, the robot takes over the automatic placements of garment reducing operator errors. Handman incorporates two Twin Super, the most productive and fastest laser in the market. One operator can load garments for 2 Handman units (4 twins) without fatigue.

Furthermore, they presented the Air Fiber Washer, the first industrial air system designed to extract microfibers during garment fabrication and thus reduce subsequent shedding in domestic laundering. Jointly developed with Inditex it extracts up to 60% of microfibers during garment manufacturing by using dynamic airflow in combination with microfiltration to capture microfibers.

[WWW.JEANOLOGIA.COM](http://WWW.JEANOLOGIA.COM)



Herzog rope-braiding machine SE 1/12-266 and SE 1/32-432 in the background © 2023 TexData International

## BRAIDING IS HERZOG

According to the motto „HERZOG is here“, the global leader from Northern Germany presented both new and well proven products from the braiding world. The biggest machine on the booth, a rope-braiding machine (SE 1/32-432) with 32 carriers for the production of core-cover-ropes with 24-130 mm diameter, was highlight and eye-catcher at the same time. The space-saving design of the take-off system, installed above the machine, was a new development that aroused great interest. Another exhibited machine was a SE 1/12-266 rope braiding machine for production of ropes with 5-25 mm. Herzog reported, there was a huge demand for braiding machines for rope making, for products used in the medical industry and for various technical braids. Besides the exhibits the machine data collection was an important issue. With the “MDE-BDE system” Herzog here again offers a flexible solution to meet customers requests.

[WWW.HERZOG-ONLINE.COM](http://WWW.HERZOG-ONLINE.COM)



The DITF presented a large number of innovations in glass virtrines © 2023 TexData International

## DITF PRESENTED A CROSS-SECTION OF THE LATEST RESEARCH FINDINGS

The 'Deutsche Institute für Textil- und Faserforschung' DITF presented a tour of its latest research findings. A newly developed flame retardant polyamide was exhibited. Here, a new process combines highly efficient flame retardency with improved physical and physiological properties of textiles. DITF research managed to incorporate the flame retardents chemically into the backbone of a PA6 polymer. Advantages are the need of a much lower quantities of flame retardants and a permanent flame retardancy is achieved. Another exhibit was a washing system for single yarns which transfers economic and ecologic advantages of ultrasonic techniques to yarn pre-treatment. The system enables yarns to be washed out with high efficiency at low temperatures. The 'Smart Scar Care' project offers customized compression textiles. Last but not least, sustainable paper yarn applications have been presented.

[WWW.DITF.DE](http://WWW.DITF.DE)

## ITA HAS ITS FEET IN THE YARN FUTURE

The Institut für Textiltechnik of RWTH Aachen University (ITA) exhibited a digital ring spinning tester, which spins recycled fibres directly and conventionally with a particularly high content of 60-70 percent. Up to now, recycled yarns have mainly been rotor-spun in this blend ratio. This results in rather coarse yarns and is not suitable for finer textiles such as outerwear. Ring spinning of recycled yarns now enables the spinning of finer yarns and thus a higher application level for recycled materials. A unique selling point of the ITA ring spinning tester is the simultaneous spinning in the direct spinning process from the sliver and in the classic ring spinning process. For this purpose, the strength and elongation of the spun yarn are determined online and digitally for the first time. The ring spinning tester is also able to produce fine ring spun yarns. These yarns made from recycled material opens up a multitude of further fields of application for woven and knitted goods. Now, for example, clothing and technical textiles can be made from recycled material, the production of which was not possible before - such as outerwear made from recycled material.

### WALK4RECYCLING

ITA Augsburg and the Recycling Atelier presented a recycling route from fibre to product („Walk4Recycling“) via the various process steps. It opened up solution paths for industrial implementation. The materials from the different processing steps were shown: torn fibres, drawing sliver, cops and package with ring spun yarn, sweater.



ITA TECHNOLOGIETRANSFER Managing Director Markus Beckmann presenting the digital ring spinning tester © 2023 TexData International

### AI-BASED QUALITY OPTIMISATION

ITA's model factory showed how they have used an AI-based optimisation technology to improve the coating and heat-setting processes. Through the use of machine learning algorithms, AI models analysed vast amounts of data and identified the most effective combination of parameters.

Furthermore, they showed a glove system to detect certain hazardous substances, a CO2 sock which contains elastic TPU fibres partly made from carbon dioxide filaments, an artificial turf structure made of bio-polyethylene (PE) as a polymer raw material and a proof-of-concept of a sensor on the tip of a knitting needle during warp knitting named SMARTNEEDLE.

[WWW.ITA.RWTH-AACHEN.DE](http://WWW.ITA.RWTH-AACHEN.DE)



**CINTE Techtexsil 2023** took place from 19 to 21 September 2023 at the Shanghai New International Expo Centre against the backdrop of technical textiles and nonwovens markets stabilizing towards a new normal after rapid growth due to the pandemic. Technological innovation, sustainable development and intelligent manufacturing are currently the most sought-after characteristics.

This is where CINTE came in, reinforcing this new direction for the industry through both its supporting program and the stands on the 40,000 m<sup>2</sup> exhibition area. With an increase of almost a third compared to 2021, 467 exhibitors from 13 countries and regions attracted a significantly international flow of visitors, totaling 15,542 visitors from 52 countries and regions. Suppliers presented the latest products for numerous application areas, with a particular focus on various finishes, technical textiles and nonwovens for agriculture, the automotive industry, protective clothing, medicine and hygiene.

Speaking at the fair's close, Ms Wilmet Shea, General Manager of Messe Frankfurt (HK) Ltd, had an optimistic outlook for the future of the sector: "Sustainability and innovation often go hand-in-hand, and walking through the various halls, zones, and pavilions these past few days the evidence for this was widespread. With environmental protection more important than ever, and buyers across application areas increasingly sourcing eco-friendly solutions, our exhibitors were well-placed to meet that demand. This fair is consistently at the leading edge of technological progress, and with the global and domestic markets showing signs of improving further, we are already looking forward to what we can offer at next year's edition."

#### **INTERNATIONALITY OF EXHIBITORS RETURNED**

With many overseas exhibitors making a comeback, this year's fair was marked by the return of the Taiwan Pavilion and the 40-exhibitor strong European Zone. Beyond the international areas, domestic pavilions were organised by Beijing Guanghua, China Hang Tang Group, Funing, Jiujing, Shenda, Tiantai, Xiantai, and Xiqiao, showcasing nonwovens for various sub-sectors, including filtration and medical. Valuable insights were exchanged at multiple fringe events, including the 11th China International Nonwovens Conference, the Advanced Technical Textiles Industry Chain Synergistic Innovation Development Forum, various events covering marine textiles and rope netting, and the "Kingsafe Dangs" National University Students' Nonwovens Development and Applications Showcase.

In the end, the international and national exhibitors were just as satisfied with this year's edition as they were with the development of the industry in China and Asia.



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Ms Sabrina Brignoli, Marketing & Communications Specialist from Itema said: "Itema manufactures weaving machines that can be fine-tuned to produce almost every kind of fabric, with our technical textiles division covering all of the different segments, from geotextiles to a variety of coatings. One recent innovation is carbon fibre paper, produced using a machine that can weave flat fabrics. At Cinte Tectextil China 2023 we have received more qualified leads than in previous years, and compared to 2018 there has been a big increase in demand for technical textiles from our customers, especially regarding coating, fibreglass, and carbon fibre."



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Mr Kabilen Sornum, Vice President Asia Pacific, Marketing & E-Commerce, Groz-Beckert East Asia also praised the return of international customers: "At this edition we are showcasing our latest innovational textile tools for the nonwovens sector, and while we are focusing on the China market, we have also seen buyers from the Middle East, Europe, Korea, and North Asia. This is a more international fair – China is open to the world again, and we can see around us that everyone is here, and the quality and innovation of buyers has improved greatly in the past three to four years. E-mobility and sustainability are two very clear trends."



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### PURPOSE-DRIVEN BUYERS SOURCED UP-TO-DATE PRODUCTS

Visitors, meanwhile, were pleased with the innovation on show across the entire platform. As usual, they were particularly impressed by both the breadth of the range and the quality of the innovations. One of the satisfied visitors was Mr Du du Lee, Purchas, Dongguan Ever Strong Bags & Caps Manufacturing, who said of his visit: "Our company mostly exports bags with functional characteristics to Europe, for military, firefighting, medical, and more, and this fair is our most important sourcing channel. The protective fabrics displayed by IBENA and other exhibitors are highly compatible with our needs, and we will continue to connect with these companies. This is a unique platform that brings together all aspects of different, highly-specialised technical textile products and technologies."

The fact that CINTE continues to address new visitors who are looking for special solutions and find what they are looking for shows Mr Philip van Leersum, General Manager, DIT B.V.. He said: "This is my first time visiting Cinte Tectextil China, and I am here specifically looking for a high-strength polyethylene yarn for application in the aerospace industry. We export across Europe and everywhere around the world, from Finland, to China, Taiwan, Indonesia, India, and the US. The market is growing after the pandemic, for example the aerospace industry experienced a downturn but has since rebounded."



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### FRINGE PROGRAMME INSPIRED INNOVATION AND COOPERATION

Just like the exhibition, the supporting program also provided plenty of opportunity for specialist discussions. The importance of this was also emphasized by Mr Charles Nie, Business Director, Hohenstein Textile Testing (Shanghai): "Hohenstein is a leading textile research, testing and certification organisation from Germany and the founder of OEKO-TEX®. This highly specialised fair allows us to reach new upstream and downstream customers across the entire technical textiles industry, and it's very helpful for us to target the non-manufacturing industry. Speaking at the Innovation Development Forum increases the audience's awareness of our organisation, and is a big reason this fair is so attractive – it offers new insight, business exchange and knowledge sharing."

### NEXT EXHIBITION 2024

The next edition of Cinte Tectextil China will take place from 19 – 21 September 2024 at the Shanghai New International Expo Centre.

[CINTE-TECTEXTIL-CHINA.HK.MESSEFRANKFURT.COM](https://www.cinte-tectextil-china.hk.messefrankfurt.com)



**T**he 62nd Dornbirn GFC Global Fiber Congress, which took place as usual in Dornbirn, Austria from September 13 - 15, 2023, was once again a great success with more than 550 participants from more than 30 countries. 125 presentations on the main topics of fiber innovation, recycling, circular economy, sustainability, nonwovens, technical textiles, sports and clothing were presented to the trade audience, who were more than satisfied with both the content and the networking among the participants.

Robert van de Kerkhof, Chief Sustainability Officer of Lenzing AG and President of the Dornbirn GFC, summed up the congress in a nutshell: "The challenges currently facing the fiber industry require fundamental changes in the value chains. We are seeing new strategic partnerships being formed to take advantage of new opportunities around innovation, circular economy and new business models. The 62nd edition of the Dornbirn GFC shows once again that it is the perfect place for such new partnerships." Fritz Weninger, Managing Director of the Dornbirn GFC, who plans to step back from his role and responsibilities in the next 2-3 years, added: "That's why we are proud to have leaders from politics, the energy sector, but also many companies and start-ups from the entire fibre value chain come together for three days to share ideas on how to accelerate our progress in greening our industry."

"The Dornbirn GFC has established itself over decades as a networking platform for discussing the challenges facing the textile industry in a controversial manner, being inspired by interesting presentations by international speakers and ultimately arriving at sustainable and scientifically sound solutions together. For us, it is the conference of the year where hundreds of ideas for shaping a green future for our industry can become reality," says Andre Wissenberg, Vice President Marketing & Communication at Oerlikon, confirming the importance and role of the Dornbirn GFC in the textile network.

## PRESENTATIONS POINT THE WAY TO THE FUTURE OF FIBERS

In addition to the opportunity for networking, the heart of the Dornbirn GFC certainly remains the high quality of the specialist lectures, which give the entire industry orientation and direction for current and future challenges and thus significantly guide its actions as an industry. Due to the abundance and great impact of the challenges - both current and medium and long-term - the lectures this year were even more important. So it was both fitting and unsurprising that the opening lecture in the morning was given by Dirk Vantyghem, Euratex, Brussels, with the title "The EU strategy for sustainable textiles - its impact on the global textile ecosystem", because the new legal provisions of the EU, which will gradually take effect from 2025 and, above all, lead to huge changes from 2030, will determine the business of tomorrow for national and international producers and suppliers. The appropriate course setting cannot begin soon enough. The European institutions are making rapid progress in translating the EU textile strategy into legislation.



Visitors listen to the lectures  
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European textile companies are committed to investing in sustainability, developing new circular business models and producing high quality textile products, as required by the new legislation. However, for this to happen, companies need a clear and coherent legal framework and a level playing field for all companies. As one of the EU's most important advisors and sparring partners, EURATEX aims to achieve exactly this.

### 3RD DORNBIRN GFC INNOVATION DAYS

A total of 25 international innovators presented their company and innovations in a lecture in the 4th lecture hall of the Dornbirn GFC. Forward-looking discussions took place at the respective "touchpoint" of the innovators and new contacts could be generated. The Innovation Days will take place again at the 63rd Dornbirn GFC 2024. Registration for participation will be possible within the framework of a "Call for Papers" until the end of the year.

### PAUL SCHLACK PRIZE 2023 AWARD CEREMONY

The Paul Schlack/Wilhelm Albrecht Prize 2023 was awarded to the innovative dissertations from Henriette Grellmann, successfully completed at the ITM of TU Dresden, and Tim Höhnemann, from DITF Denkerdorf. Henriette convinced the jury with the title: "Technological development of textile-based actuator and sensor structures for complex deformable adaptive fiber-elastomer composites" resp. The dissertation deals with the development of textile-based actuator and sensor systems

for adaptive fiber-elastomer composites. Tim's dissertation is titled: "Generation of monofilaments with defined cross-sectional shape from polymer melt – Correlation of die layout, polymer morphology and process parameters with the bending behavior". The award ceremony was organized and conducted by Mr. Frédéric van Houte, CIRFS.

### YOUNG SCIENTIST AWARD POWERED BY LENZING AG

A jury of experts nominated the 2 winners from numerous applications. On the opening day, the prize money of € 5,000 per winner was awarded at the gala evening at Messe Dornbirn. "Comparing Modal with Recycled Modal", is the title of the dissertation by Nina Sirén, student at Aalto University. The study compares pre-consumer modal with modal recycled using the loncell® process.



Dornbirn GFC puts you in a good mood. Andreas Dorner, Sr Commercial Director Textiles Lenzing, Robert van de Kerkhof, Chief Sustainability Officer of Lenzing, Fritz Weninger, Managing Director Austrian Fibers Institute, and Frédéric Van Houte, Director General - CIRFS show this here. © 2023 2023 AUSTRIAN FIBERS INSTITUTE

Clara Davis impressed with the paper titled "Advanced Overcoming Bacterial Nanocellulose for New Applications. This study explores the potential of using bacterial nanocellulose (BNC) as a tree-free feedstock for regenerated cellulose fibers.

### OUTLOOK INTO THE FUTURE

The Managing Director of the Austrian Fibers Institute gave an insight into the future of the Dornbirn GFC, "The early focus on sustainability, circular economy and recycling made the Dornbirn GFC a very relevant idea and network generator for the fiber and textile industry. The holistic approach by integrating "startups" or even "cross-industry" is now bearing fruit. Through cooperations and alliances the Dornbirn GFC is gaining more and more traction on a global level. One example is the Dornbirn GFC ASIA. Others will follow, and we see a bright future ahead. As a CEO of a major fiber manufacturer once said, "Come to Dornbirn, this is the best place to learn."

### 63RD DORNBIRN GFC 2024

Preparations for the 63rd Dornbirn GFC 2024 and the 4th Innovation Days have started. The core topic will continue to be the important area of fiber innovation. The package of topics will be presented in the "Call for Papers" in November. Presentations can then be submitted, as usual, until the end of the year. The congress will take place in Dornbirn at the Kulturhaus from September 11 to 13, 2024.



There is plenty of time for networking in the foyer between lectures © 2023 AUSTRIAN FIBERS INSTITUTE



The accompanying exhibition always attracts many interested parties © 2023 AUSTRIAN FIBERS INSTITUTE

### ORGANIZATIONAL ALIGNMENT AND DEVELOPMENT

The successful GFC organization is very lean and operational and is led by Friedrich Weninger as Managing Director and Sonja Spöcker in an operational and implementation-oriented manner. Due to Friedrich Weninger's wish to step back, Andreas Dorner was appointed by all necessary stakeholders of the Austrian Fiber Institute in summer 2023 to start as Co-Managing Director and to take over the management for the next 2-3 years during the handover process.

[WWW.DORNBIRN-GFC.COM](http://WWW.DORNBIRN-GFC.COM)

# Biological transformation of textile recycling: Enzymatic, selective degradation of used textiles combined with upcycling into sustainable fibres and additives

AUTHORS: STEFAN SCHONAUER; RICARDA WISSEL; DR. LUKASZ DEBICKI; PROF. DR. THOMAS GRIES

In current everyday life, many used textiles made from fibre mixtures are mostly processed by so-called „downcycling“ into products of significantly lower quality, such as painter’s fleece or insulation materials. Further recycling of these products often does not take place due to a lack of material or raw material recycling possibilities, resulting in the final „dumping“ of these materials as aggregates in the construction industry or thermal utilisation for energy recovery. The „EnzyDegTex“ project makes the difference here and creates the basis for a raw material recycling of mixed used textiles by means of enzymatic recycling. This enables the raw material reuse of this valuable material in new textiles or alternative plastic products.

## Problem definition

The development and expansion of national, international and global circular economies for different waste fractions will play a central role in the future both for the environmental economy and for the security of supply in Germany, Europe and the world. Textile waste has a very high, so far almost completely unused potential, as its disposal currently takes place in a linear and non-circular way.

In the region of North-West Europe, approx. 4.7 million tonnes of used textiles (2020) are collected annually [Cir20]. In Germany alone, more than 1.5 million tonnes of post-consumer textile waste from private households are currently generated per year [Bvs20].

In addition, there is production waste from industry and post-use textile waste, especially in the form of technical textiles such as filter materials. A further increase in these quantities can be expected in the coming years. According to estimates by the Ellen MacArthur Foundation (Coves, United Kingdom), the share of global CO2 emissions from textile production will also increase from 2% in 2015 to up to 26% in 2050. During this period, the amount of resources consumed is also expected to increase from 98 million tonnes to 300 million tonnes. These essential resources include petroleum and fossil-based base chemicals. [BFG+17]

Currently, the recycling of widely used mixed textiles made of polyethylene terephthalate (PET) and cotton, also known as polycotton, is only possible to a limited extent with established recycling methods. Overall, less than 0.1 % of all used clothing textiles are currently recycled into new clothing [Cir20]. The high molecular selectivity of enzymes makes it possible to hydrolyse PET fibres from mixed textiles in a targeted manner, whereby the oligomers and finally the monomers of the PET polymer, terephthalic acid and ethylene glycol, are released. These monomers can be purified to a high degree of purity and recovered for renewed PET synthesis without any loss of quality (PET fibre to PET fibre recycling).

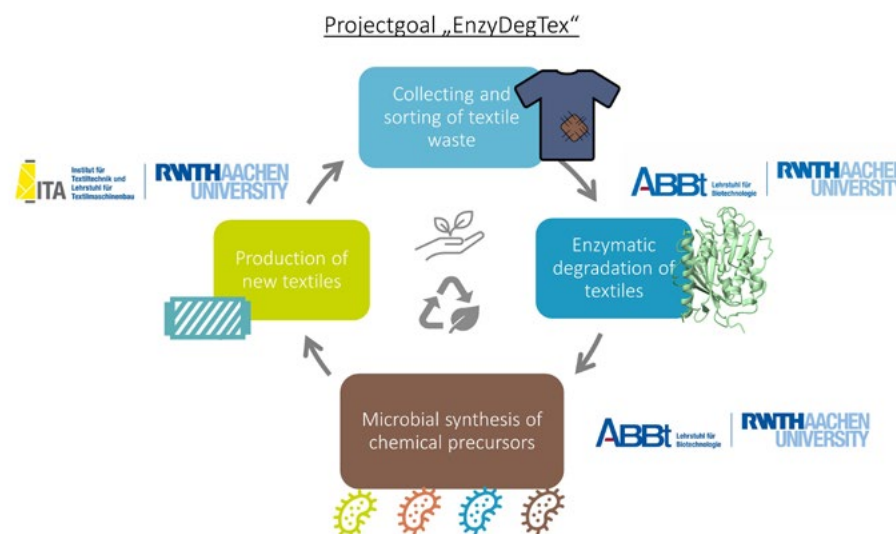


Fig. 1 - © ITA

In parallel, the cotton fibres and textile additives enriched in the hydrolysis broth (including dyes, yarns from other polymers or coatings) can be isolated and made available for reuse. All other substances that cannot be directly utilised in the re-synthesis as well as synthesis residues and use-related impurities serve as organic, bio-based growth substrates for the production of microbial biopolymers and organic, fossil-free base chemicals in the context of subsequent microbial upcycling. To reduce the also energetically costly separation effort, the PET monomers can also remain in the hydrolysis broth and also be used as valuable substrates.

### **Aims and contents of the project** **EnzyDegTex**

Biotechnological processes are often divided into three different „levels“. The first level refers to the use of food such as starch or sugars as substrates (food to chemicals). In the second level, substrates are utilized that have no relevance as food (non-food to chemicals). The third level uses waste as a substrate and thus combines disposal and the value-added upcycling to new products (waste to chemicals).

Within the EnzyDegTex project, a level 3 process is being developed. The aim of the project is to recover base chemicals from waste textiles and reuse them to manufacture new textile products. For this purpose, activity-optimized, specific enzymes and genome-optimized microorganisms

are used. First, enzymes break down the PET fibres into monomeric building blocks. These are then metabolized by microorganisms for biomass formation and for the production of polyhydroxybutyric acid (PHB) or long-chain alcohols or diols, which can then be reused for fiber and textile production.

### **Relevance of additives, dyes and crystallinity**

Additives are an essential and indispensable component of textiles. Therefore, it is not possible to obtain used textiles for enzymatic recycling without residues of processing aids, finishing substances such as dyes, or even impurities from the use phase. These substances, on their own and even more potent in the mixture, can potentially have an influence on the specific activity of the optimized enzymes, thus reducing the hydrolysis efficiency. For this reason, it is essential to investigate the influence of these highly diverse additives on enzymatic decomposition.

To answer the question of how additives and dyes affect degradation, it was first researched which additives can be expected qualitatively and quantitatively in the targeted textiles. Subsequently, common additives were selected and tested with three different degradation enzymes. No inhibition of enzyme activities was detected in the presence of titanium dioxide and carbon black. The dye Tetrasil Red only interfered with the enzymes at higher concentrations and Dianix Navy only interfered with one of the tested enzymes.

Another key factor is the high crystallinity of the fibers used in textiles, as enzymes potentially attack only the amorphous, and not the crystalline, areas. Various approaches are currently being pursued and pre-treatments are being tested to reduce the crystallinity of the used textile substrate.

### **PHB production and first spinning trials**

Research is currently carried out regarding a large number of new polymers that can replace established, petroleum-based polymers. The focus is on biogenic origin, preferably using waste, and biodegradability of the polymers. The polymers considered or synthesized in the EnzyDegTex project meet these requirements. Thus, PHB and lactic acid can be obtained from the degradation products of enzymatic degradation (especially terephthalic acid and ethylene glycol) by microorganisms. PHB is produced directly in the bacterial cells as a storage material and can be purified and used using simple processes. Lactic acid can be polymerized to polylactide (PLA) using conventional methods. PHB/PLA blends can thus be processed into filaments in a melt spinning process and subsequently into textile demonstrators. The investigated process chain shows the potential to develop a considerable and almost unused waste stream into new raw materials through biological recycling.

We would like to thank the BMBF for funding this project within the framework of the Bio4MatPro competence center and look forward to further research and interest from industry.

### **Literature**

[BFG+17]

Ellen MacArthur Foundation: Balmond, L.; Fuchs, L.; Gillet C.; Hermann, S.; Morlet, A.; Opsoemer, R.

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[Bvs20]

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[Cir20]

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# Industrial RePAN - Recycling of PAN- containing production waste

AUTHORS: STEFAN SCHONAUER; PROF. DR. THOMAS GRIES

## Lead/ Abstract

Production waste containing polyacrylonitrile (PAN) is usually not recycled, but instead sent for thermal recovery. Common reprocessing methods that use solvents typically focus on materials such as PET or cotton, as these are the most widely used. However, this is a paradoxical circumstance, as PAN is a wet-spun polymer that is highly soluble and ideally suited for solvent-based reprocessing.

The industrial RePAN project was set up to overcome this discrepancy and develop the process for solvent-based reprocessing of PAN materials.

## The Challenges

The effective use of waste as a source of resources, the closing of material cycles and the consistent reduction of CO<sub>2</sub> emissions represent an outstanding challenge for the current generation. Sustainability has become an increasingly important lifestyle choice and recycling is becoming a selling point that cannot be avoided in the future. In the textile industry, however, most waste materials are either processed into low-quality blended yarns or nonwovens or sent directly for thermal recycling. There are already approaches to recover fibre types such as PET and cotton from production or end-of-use waste without compromising the quality of the products. In contrast, other fibre types such as polyacrylonitrile (PAN) are less often considered. Moreover,

neither a return system nor a recycling process exists at national, European or international level to close the loop of PAN-containing textile waste and produce equivalent PAN products.

Given that polyacrylonitrile (PAN) is liquefied using a solvent to make it processable, the question arose as to whether there is a way to also liquefy this production waste, filter it and reintroduce it into the manufacturing process.

Based on these considerations, the „RePAN“ project came into being, in which the basic feasibility of this procedure could be demonstrated.

Based on these findings, the process is now being implemented on a scale for industrial spinning plants at our project partners, and the yarns produced from it are being reintegrated into the production of living rugs.



Fig. 1 - Staple fibre yarn and demonstrator knit of RePAN fibres. © ITA

### **Objectives and Contents of the Project**

In the Industrial RePAN project, the aim is to convert both production waste and end-of-use waste containing polyacrylonitrile (PAN) into recycled PAN multifilament and staple fibre yarns, which serve as semi-finished textile products, and to produce textile end products from them. Living rugs usually consist of either a blend of PAN and cotton in a 50/50 ratio or 100 % PAN. This enables the exemplary representation of a complete recycling process for PAN-containing textile waste. The quality of the recycled PAN fibres is on a par with virgin material and is thus available for the entire range of virgin material applications.

The producers of polyacrylonitrile (PAN) staple fibres, mostly large companies, and their processors, mainly small and medium-sized enterprises, are actively working to use their waste products in the spirit of sustainability by establishing more efficient internal and external material cycles. Their aim is to develop more sustainable products and make them available to end consumers. In addition, medium-sized textile finishers are working on the development of de-dyeing processes and dyeing formulations for recycled PAN fibres, as colouring is an outstanding quality feature, especially in the field of clothing and household textiles.

The technical feasibility of PAN recycling is being investigated along the entire process chain, starting with the recovery of PAN po-

lymers, through the production of PAN fibres to the end product (textile surface). This development takes place on a technical and semi-industrial scale. Sources of secondary raw materials in this project include both production waste generated during the manufacture of living rugs and the living rugs themselves as rejects, which are representative of end-of-use waste.

### **Relevance of Washing and Decolorization Processes**

In the production process, various substances, such as lubricants and dyes, are applied to the PAN fibres. When the fibres are recycled, these substances are undesirable and interfere with the processing. The aim is therefore to remove these substances as completely as possible in order to obtain white RePAN polymer. However, separate refinement processes such as the removal of dyes are associated with high costs and greatly reduce the competitiveness of the recycled material.

Therefore, an approach was pursued in the project in which a large part of the dyes could be removed by adjusting the extraction parameters and additives in the spinning baths. The result is fibres that have a dyeability comparable to virgin material. Starting from grey-blue waste, however, a residual colour currently remains, which gives the recycle a pearly white tone (see picture).

The remaining colour depends more on the type of dyes used than on the original colour of the material. Common blue and red dyes could be removed much better than yellow. Therefore, we are currently working on adapting the process for removing the dye Basic Yellow 28.

**CreaSolv® Separation and Spinning Trials**  
In cooperation with IVV Fraunhofer, the shredded waste fibres are fed into the CreaSolv® process. CreaSolv® makes it possible to separate plastic types from other plastics and impurities on the basis of their solubility without chemically changing the target plastic.

In the process, in combination with mechanical, chemical and thermal processes, high-purity materials with virgin properties are recovered from complex mixtures of residues and odours and impurities are eliminated.

Only solvents that do not require GHS labelling are used, which, in addition to almost complete recovery, guarantee safe and environmentally friendly processing. Once in solution, insoluble foreign materials can be mechanically or molecularly separated from the PAN solution.

The 100 % PAN pellets produced with this process are examined in PAN recycle blends with secondary raw material contents between 25 and 100 %.

In the spinning trials, fibres in the requirement profile could be produced and processed with up to 50% recycled content.

The staple fibre yarns produced were processed into samples on a commercial flat knitting machine (see picture).

In summary, blue-grey textile waste could be processed and replaced up to 50% of virgin material in PAN fibres without reducing the mechanical properties. The dyeability of the material is also comparable to that of virgin material. However, a yellowish colour cast remains, which leads to colour distortion during dyeing and is still the subject of our research.

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#Fiber #Organic Cotton

## **RELEASE OF GOTS DUE DILIGENCE HANDBOOK MARKS SUSTAINABLE MILESTONE FOR TEXTILE INDUSTRY**

The Global Organic Textile Standard (GOTS), in cooperation with the Hague-based UpRights Foundation, is proud to launch the GOTS Due Diligence Handbook for Certified Entities. This landmark publication is a crucial step forward in the promotion of sustainability, human rights and ethical business conduct in the textile sector.

[tinyurl.com/4jjt5zfe](https://tinyurl.com/4jjt5zfe)

#Cooperation #NGO #Seal

## **SUPPLIER LIST OF TEXTILES PARTNERSHIP MEMBERS PUBLISHED**

The German Partnership for Sustainable Textiles welcomes the upload of the current supplier list of the member companies at their partner Open Supply Hub (OSH). According to the Partnership Secretariat, the new list covers all Tier 1 suppliers of member companies, i.e. the stage of confection and final manufacturing, and comprises a total of 8755 production sites worldwide.

[tinyurl.com/y8h4ejtn](https://tinyurl.com/y8h4ejtn)

#Fiber #Polyester #PET

## **THE MICROFIBRE CONSORTIUM AND ZDHC FOUNDATION UNITE TO COMBAT MICROFIBRE RELEASE**



© 2023 ZDHC Foundation

The Microfibre Consortium and ZDHC Roadmap to Zero Programme have joined forces to release a snapshot guidance that sets out to help tackle microfibre loss in the textile industry. This guidance is aimed at empowering the value chain to take effective measures against microfibre pollution.

[www.microfibreconsortium.com/resources-1](https://www.microfibreconsortium.com/resources-1)

#Textile Chemistry

## **WHITE PAPER EXPLORES NEW APPROACHES TO COUNTING CARBON IN CHEMICAL SECTOR**

Together for Sustainability (TFS), a global chemical initiative with 50 members, including some of the world's largest chemical groups, has released a White Paper exploring solutions to harmonise carbon accounting.

[tinyurl.com/ta84n7h2](https://tinyurl.com/ta84n7h2)

#Fiber #Plastic

## **NEGOTIATIONS FOR A UN TREATY TO END PLASTIC POLLUTION CONTINUE**

The negotiations for a UN treaty to end plastic pollution continue with the third session of the Intergovernmental Negotiating Committee (INC) from the 13th - 19th November 2023, at the UN Environment Programme (UNEP) Headquarters in Nairobi, Kenya. Released in September, the "zero draft" treaty text will be a key document to shape the upcoming negotiations. The text outlines potential elements of what could be included in a UN treaty to end plastic pollution. The Ellen MacArthur Foundation believes the "zero draft" treaty text represents a solid starting point for governments to advance on substantial negotiations next week. However, the level of ambition should be further strengthened in several areas of the instrument.

[tinyurl.com/5av4u4kv](https://tinyurl.com/5av4u4kv)

[www.ellenmacarthurfoundation.org](https://www.ellenmacarthurfoundation.org)

#Apparel #Fashion

## **SUSTAINABLE APPAREL COALITION LAUNCHES HIGG FEM 4.0**

In partnership with Worldly, the Sustainable Apparel Coalition (SAC) launched the Higg Facility Environmental Module (FEM) 4.0 tool. This update marks an industry milestone in sustainability reporting to meet pressing environmental issues and industry standards, positioning Higg FEM 4.0, part

of the Higg Index suite of tools, as the most applicable and leading assessment for environmental performance in the consumer goods industry.

[apparelcoalition.org](https://apparelcoalition.org)

#Retail

## **FAIR WEAR AND STTI ANNOUNCE COLLABORATION**

Fair Wear Foundation and the Sustainable Terms of Trade Initiative sign a Memorandum of Understanding, committing to further strengthening their collaboration on advancing systemic change in the garment and textile industry through the promotion and facilitation of responsible purchasing practices and, more broadly, the impactful implementation of the human rights due diligence (HRDD) framework.

[www.fairwear.org](https://www.fairwear.org)

[www.sustainabletermsoftradeinitiative.com](https://www.sustainabletermsoftradeinitiative.com)

#Apparel #Fashion

## **SAC AND IAF ANNOUNCE COLLABORATION AGREEMENT**

The Sustainable Apparel Coalition (SAC), has announced the signing of a Memorandum of Understanding (MoU), outlining a strategic collaboration with the International Apparel Federation (IAF). This collaboration aims to advance a shared vision for equitable and sustainable global supply chains for the apparel and fashion industry

[www.iafnet.com](https://www.iafnet.com)

# RECYCLING

#Fiber

## **INFINITED FIBER'S FLAGSHIP FACTORY PROGRESSES**

Infinite Fiber Company is in the process of scaling up, and the work to build the first commercial-scale Infinna™ factory has advanced largely according to plan. Reflecting the current financial environment, they have adjusted the order of their Flagship factory project's key milestones. One of the major project milestones is securing the environmental permit for the Flagship factory, and currently, they are in the final stages of refining the permit application before submitting it. Infinite Fiber's objective all along has been to submit a meticulously prepared, high-quality application to facilitate the evaluation process. They estimate the permit's evaluation period to last about a year. While most of the construction is planned post-permit, they'll continue advancing the project at full speed on all fronts while the evaluation process runs its course. This shift in the order of project milestones enables Infinite Fiber to e.g. further optimize the plant, equipment engineering and operational expenditure – lowering the risks related to the project, construction and production ramp-up – already at this stage of the project. The construction period of this kind of industrial facility is typically about two years.

[www.infinitefiber.com](http://www.infinitefiber.com)

#Fiber

## **NAIA™ RENEW FIBERS TOOK CENTER AT THE 2023 TEXTILE EXCHANGE CONFERENCE**

As the London meeting brings material production into the climate conversation, Naia™ is at the frontline to promote Eastman's patented carbon renewal technology opportunities and its commitment for a full transparency from tree to fiber. Naia™ Renew, available at scale as both a filament yarn and staple fiber, is produced from 60% sustainably sourced wood pulp and 40% certified waste materials and can be blended with other sustainable fibers. To make recycling options economically efficient and enable long-term success, Eastman is actively engaging with multiple value chain players, recognizing the need for systematic changes in collecting and sorting.

[www.eastman.com](http://www.eastman.com)



Dresses made from Naia™ © Eastman.



Carbios Team © Carbios

#Fiber

## **CARBIOS OBTAINS BUILDING AND OPERATING PERMITS**

Carbios obtains building and operating permits, in line with announced schedule, for world's first PET biorecycling plant in Longlaville. Carbios announced that it has been granted the building permit and operating authorization for the world's first PET biorecycling plant, allowing construction to start. The plant will be built in Longlaville in the Grand-Est Region on a 13.7-hectare site adjacent to the existing PET production plant of Indorama Ventures, its strategic partner. Plant funding is secured. In 2023, Carbios successfully completed its capital increase for approximately €141 million.

[www.carbios.com](http://www.carbios.com)

#Process #Fiber

## **WORN AGAIN CONTINUES TO ENABLE A CIRCULAR ECONOMY FOR SWITZERLAND**

In partnership with IWK, Worn Again, Sulzer and others have succeeded in their joint bid for grant funding from Innosuisse. The

flagship project, called "Towards a NetZero Plastics Industry", will create a platform for Swiss companies to foster collaboration and drive systemic change within the plastics industry. Worn Again's contribution will be focussed on a specific upcycling pathway, converting used textiles into a higher-grade PET. The project, which will start in January 2024 and run through 2028, aligns with Worn Again's plans to bring online its demonstration chemical recycling plant in Winterthur. Worn Again will produce PET for application testing within Sulzer Chemtech's technology to convert the raw material into advanced foams, and within various injection moulding technologies at IWK's facility.

[infinitefiber.com](http://infinitefiber.com)

#Fiber

## **RE:NEWCELL WARNING FOR SALES, PROFIT AND CASH FLOW**

In its Interim Report Q3 2023, the Swedish company Renewcell reports that not as much CIRCULOSE® was sold in 2023 as forecast. The new CEO Magnus Håkansson said: „Renewcell 1 in Ortvisen has produced approximately 16,000 tonnes of prime quality CIRCULOSE®, of which approximately 4,600 tonnes have reached the fiber producers. (...) Now we need to see a transition from development projects to orders for main collections on a larger scale". Shortly after the news was announced, Indindex has ordered 2,000 tonnes of fibres made from CIRCULOSE®.

[www.renewcell.com](http://www.renewcell.com)

#Textile machines #Digital Printing

## **DURST GROUP ACQUIRED ALEPH**



Aleph at ITMA 2023 © 2023 TexData International

Durst Group, manufacturer of advanced digital printing and production solutions, has acquired Aleph Srl, a pioneer in sustainable digital solutions for textiles and interior and exterior decorations. With this strategic move, Durst Group further enhances its position in water-based and sustainable printing technologies. For Durst Group, the acquisition also serves as a bridge to Como, Italy, the center for textile design and high-quality applications.

[www.durst-group.com](http://www.durst-group.com)

[www.alephteam.com](http://www.alephteam.com)

#Nonwovens #Fiber

## **VPC GROUP ACQUIRES FIBRIX LLC**

VPC Group, a vertically integrated foam and fibre manufacturer announced the acquisition of Fibrix LLC, a leader in the nonwoven business. This strategic acquisition will allow VPC to better serve their customer base across all product lines.

[www.vpcgroup.com](http://www.vpcgroup.com) [www.fibrix.com](http://www.fibrix.com)

#Textile Chemistry

## **BASF VENTURE CAPITAL INVESTS IN STARTUP DEPOLY SA**

BASF Venture Capital (BVC), the corporate venture company of the BASF Group, announced an investment in the Swiss startup DePoly, a sustainable plastic solutions provider developing a unique chemical recycling technology. Founded in 2020, the company has developed a chemical recycling tech-



DePoly Team © BASF

nology that converts mixed post-consumer and post-industrial polyester plastic waste streams, as well as polyester-containing fabrics and fibers, back into their precursors at virgin-grade quality.

[www.depoly.co](http://www.depoly.co)

[www.basf-vc.de](http://www.basf-vc.de)

#Technical textiles #Composites

## **ASAHI KASEI INVESTS IN US STARTUP NFW**

Asahi Kasei has decided to invest in US-based startup NFW, a producer of non-petroleum-based leather alternative for car interiors.

[www.asahi-kasei.com](http://www.asahi-kasei.com) [www.nfw.earth](http://www.nfw.earth)

#Brand #Retail

## **HUGO BOSS INVESTS MORE THAN 100 MILLION EUROS**



Distribution center in Filderstadt-Bonlanden © HUGO BOSS

To further support the successful execution of its "CLAIM 5" growth strategy, HUGO BOSS is expanding its distribution center for flat-packed goods in Filderstadt-Bonlanden near Stuttgart, Germany. The Group is thus responding to increased global customer demand for the BOSS and HUGO collections.

[group.hugoboss.com](http://group.hugoboss.com)

#Home textiles

## **HOFTEN GROUP CLOSES PART OF THE NEUTEX DIVISION**

The management board of the Hoftex Group has decided, with the approval of the corporate supervisory board, to close the German production facility of the Neutex division located at the Münchberg site. The closing will impact approx. 90 workplaces in Münchberg. Production is expected to be discontinued by the end of the first quarter of 2024. Reasons are a declining market for home textiles, a continuous price pressure and significant cost increases.

[www.hoftexgroup.com](http://www.hoftexgroup.com)

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# PEOPLE

#Plastic #Nonwovens

## **BERRY GLOBAL APPOINTS KEVIN KWILINSKI AS CEO**



Kevin Kwilinski © 2022 Business Wire

Berry Global Group, a leading supplier of packaging solutions for consumer goods and industrial products, today announced that its Board of Directors has unanimously elected Kevin Kwilinski as Chief Executive Officer of Berry, effective October 2, 2023. In connection with this appointment, the Board has elected Stephen Sterrett, Lead Independent Director, as Chairman of the Board, also effective on October 2, 2023. As previously announced in February 2023, Tom Salmon will retire from his roles as CEO and Chairman, and he will remain with the Company through the end of the calendar year in an advisory capacity to ensure a smooth transition. Mr. Kwilinski brings to Berry nearly three decades of experience in the packaging industry and a track record of driving operational excellence, expanding margins and managing complex global operations.

[www.berryglobal.com](http://www.berryglobal.com)

#Raw Material #Cotton #Association

## **JEAN-PAUL HAESSIG IS NEW PRESIDENT OF THE BREMEN COTTON EXCHANGE**



Jean-Paul Haessig © 2022 Bremen Cotton Exchange

The Board of the Bremen Cotton Exchange elected Jean-Paul Haessig (61) President of the association for the next two years on the occasion of the General Assembly on 29 June. Haessig is a director of Ho Chi Minh City, Vietnam and Singapore-based trading company Asian Cotton Traders PTE Ltd. He succeeds the previous President Stephanie Silber (43), Managing Director of Otto Stadlander GmbH, Bremen, who remains a member of the Executive Committee in the role of a Vice President. The Vice Presidents Jens D. Lukaczik (57), Managing Partner of the service company Cargo Control Germany GmbH & Co. KG in Bremen and Fritz A. Grobien (65), Managing Partner of Albrecht, Müller-Pearse & Co. Trade (GmbH & Co.) KG, Bremen will continue to serve as members of the Executive Committee.

[www.baumwollboerse.de/en/](http://www.baumwollboerse.de/en/)

#Textile Machines #Association

## **MARCO SALVADÈ IS NEW ACIMIT PRESIDENT**



Marco Salvadè © 2022 ACIMIT

At ACIMIT's General Assembly held on July 4th, Marco Salvadè has been appointed to replace Alessandro Zucchi as President of ACIMIT. Born in Como in 1967, Marco Salvadè is married with two children. He began his career at Salvadè Srl, the family company specializing in the finishing machinery sector, founded by his father and uncle in 1967. After being a member of the company's board of directors, he has been President since 2021. Marco Salvadè has long been active in the life of the association. Since 2018 he has been a member of ACIMIT's General Council, and since March 2023 he has been part of the Italian delegation at CEMATEX. Along with the new president, the General Assembly also elected its new Vice Presidents, Chiara Bonino, Federico Businaro, Ugo Ghilardi and Cristian Locatelli.

[www.acimit.it](http://www.acimit.it)

#Textile Machines #Association

## **GIORGIO CALCULLI IS NEW MANAGING DIRECTOR OF ACIMIT**



Giorgio Calculli © 2023 ACIMIT

Giorgio Calculli has been appointed new managing director of ACIMIT, the Association of Italian Textile Machinery Manufacturers. A law graduate with a Master's degree in training and employment policies, he has been on staff at ACIMIT since 2006 as head of the Association's training, internal relations and technical department. Calculli takes over as ACIMIT managing director from Federico Pellegata, who after 25 years managing the Association has been appointed CEO of ACIMIT Servizi srl, the company set up by ACIMIT to provide services in support of associated member companies for the promotion of the Italian textile machinery industry in Italy and abroad. Giorgio Calculli comments: "I wish (...) to lend continuity to the work carried out by Federico Pellegata, for whom the success enjoyed at the latest edition of ITMA is only the most evident expression."

[www.acimit.it](http://www.acimit.it)

# RESEARCH & DEVELOPMENT



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## #Recycling

### **PARTNER MEETING AT THE RECYCLING ATELIER OF THE THA AND THE ITA**

The third partner meeting took place in mid-September at the Recycling Atelier of Augsburg University of Applied Sciences (THA) and ITA Augsburg. 26 participants from eleven companies, two external research institutes and one association looked back on the progress made in the first year and gathered further ideas for the future of the circular economy in the textile industry.

## #Fiber #Carbon Fiber

### **ITA MASTER'S GRADUATE WINS HANNS VOITH FOUNDATION AWARD 2023**

In his Master's thesis, Flávio André Marter Diniz, a graduate of the Institut für Textiltechnik of RWTH Aachen University (ITA), developed ultra-thin polyethylene (PE) carbon fibres with a filament diameter 2-3 times smaller than usual. In addition, the use of PE-based precursors will make



Professor Dr Thomas Gries with the award winner Flávio André Marter Diniz © Hanns Voith Foundation, Oliver Vogel

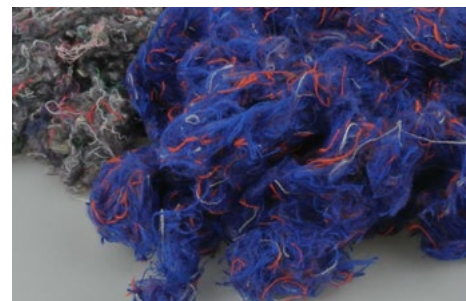
it possible to reduce the price of carbon fibres by 50 per cent in the future, thus opening up a wide range of other possible applications in key industries such as wind power, aerospace and auto-motive. For this groundbreaking development, Mr. Marter Diniz was awarded the Hanns Voith Prize on 23 June by Professor Dr mult. Sigmar Wittig with the Hanns Voith Foundation Award in the category „New Materials“. The prize is endowed with € 5,000 in prize money.

[www.ita.rwth-aachen.de](http://www.ita.rwth-aachen.de)

## #Recycling

### **RAW MATERIAL CLASSIFICATION OF RECYCLED FIBRES**

It is demanding to obtain high-quality yarns from used textiles and to process them into equally high-quality products. German DITF & STFI have developed a new test routine for this purpose. Based on the test results, the tearing parameters can be better adjusted to the material so that the fibers are less shortened.



Used textiles after the tearing process. Back: Cotton, front: aramid © Photo: DITF

With the new test routine and the resulting optimized processes, it was possible to produce yarns from 100 percent recycled aramid fibers, which were then further processed into knitted fabrics. Since aramid fibers are very expensive, the process reduces costs, saves raw materials and contributes to greater sustainability. The research work of DITF and STFI, on the other hand, shows that it is possible to reprocess 100 percent of recycled material. The final report (German) on the project can be requested from STFI or DITF.

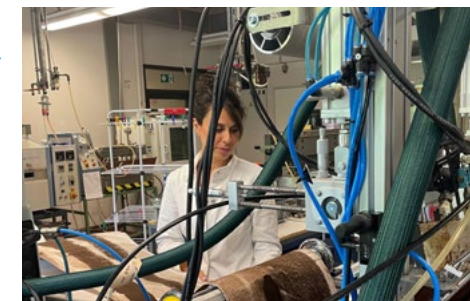
[www.ditf.de](http://www.ditf.de)

[www.stfi.de](http://www.stfi.de)

## #Geotextiles #Coating

### **LIGNIN COATING MAKES NATURAL FIBERS GEOTEXTILES DURABLE**

The German Institutes of Textile and Fiber Research Denkendorf (DITF) are developing a bio-based protective coating that extends the service life of environmentally friendly natural fibers. In order to significantly extend the degradation time and



Coating process of a cellulose-based nonwoven with the lignin compound using thermoplastic processing methods on a continuous coating line © Photo: DITF

make them suitable for geotextiles, the Denkendorf team researches a protective coating. This coating, based on lignin, is itself biodegradable and does not generate microplastics in the soil. Lignin is indeed biodegradable, but this degradation takes a very long time in nature.

[www.ditf.de](http://www.ditf.de)

## #Award

### **AVK INNOVATION AWARD 2023 - THE WINNERS HAVE BEEN ANNOUNCED**

The winners of the prestigious Innovation Award for Fiber Reinforced Plastics from the AVK Industrievereinigung Verstärkte Kunststoffe were presented in Salzburg this year. First place in the „Research and Science“ category went to the Faserinstitut Bremen e. V. for the „Development of a stereocomplex PLA blend on a pilot plant scale“. Other winners were KraussMaffei Technologies and partner Wirthwein as well as SELeichtbauzentrum Sachsen and partner KWD Kupplungswerk Dresden.

[www.avk-tv.de](http://www.avk-tv.de)

# AACHEN-DRESDEN-DENKENDORF INTERNATIONAL TEXTILE CONFERENCE

## DIFFERENT FORMATS DISPLAY THE LATEST SOLUTIONS

The regions of Aachen, Dresden and Denkendorf, which together successfully form a triangle for textile research and innovation and thus jointly secure the textile future, invite you to the 18th ADD International Textile Conference from Nov. 30 to Dec. 1, 2023. This year's partner country is India. With over 600 participants from industry and science, the event is one of the most important textile conferences in Europe. The textile industry of the future is emission-free, digital and uses sustainable, recyclable raw materials, its supply chains are secure and transparent and it reacts flexibly to market changes through regional on-demand production. These megatrends are currently being worked on at full speed in research and development.

At ADD-ITC 2023, these will be presented in plenary and keynote speeches as well as technical presentations and poster contributions. The plenary and keynote speeches cover a wide and interesting range of topics, from abstract topics such as the metaverse by Prof. Dr. Frank H. P. Fitzek from TU Dresden or Advancing molecular sensor integration in textiles by Prof. Dr. Gianurelio Cuniberti, Institute of Materials Science at TU Dresden, to general sustainability topics such as Microplastics in the environment by Prof. Dr. Christian Laforsch from the University of Bayreuth.

Topics whose application is imminent, such as 'Use of artificial intelligence in industry' by Dr. Olaf Enge-Rosenblatt from the Fraunhofer Institute for Integrated

Circuits IIS or 'Polymers with new functions designed for partially biobased carbon fiber precursors' by Prof. Dr. Brigitte Voit from the Leibniz Institute of Polymer Research Dresden, will range through to topics that come directly from industry, such as 'Mass production of smart textiles by using embroidery technology' by Steliyan Vasilev from 3E Smart Solutions (Krefeld / Germany).

Topics related to the partner country will also be covered extensively. For example, there will be the presentation "Opportunities, challenges and future of lightweight and structural composites in India" by Dr. Amol Ogale from Reliance Industries Limited (Mumbai / India) or the presentation 'Implementing a Research 4.

0 wet spinning facility at BTRA for the development of innovative and sustainable high-performance textiles aiming the Indian market' by Sreekumar Thaliyil Veedu from the Bombay Textile Research Association (Mumbai / India), which he will give together with José Canga Rodríguez from DIENES Apparatebau GmbH (Mühlheim am Main / Germany).

At the ADD-ITC, participants will have the opportunity to exchange ideas with colleagues from industry and science and, of course, find inspiration for new research, new products, market niches and business - all of which makes the ADD-ITC the event that it is: one of the best, which always wants to be and will be even better.

[WWW.AACHEN-DRESDEN-DENKENDORF.DE](http://WWW.AACHEN-DRESDEN-DENKENDORF.DE)

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DRESDEN**

**AACHEN - DRESDEN - DENKENDORF  
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**PARTNER COUNTRY: INDIA**

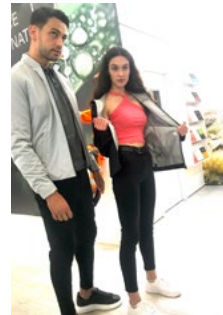
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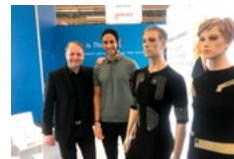
TOP THEME:  
**EU TEXTILE STRATEGY - WHAT'S NEW?**

## PREVIEW **TECHTEXTIL / TEXPROCESS 2024**

LATEST FROM  
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NONWOVENS, COMPOSITES, PROCESSING  
& MACHINERY

**REVIEW ITMA ASIA + CITME 2022**

**SPECIAL: NEW FIBERS - UPDATE**  
**#INTERVIEWS**



**+++ NEXT ISSUE WILL BE PUBLISHED ON 2024-04-16 +++**

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