garment technology exhibition. At one of the largest booths of ITMA Barcelona 2019, we can see the latest conventional and digital printing solutions as well as get the opportunity to visit the brand new rotary screen and digital ink technology centre to assist you in finding the right equipment for printing process, the company said in a media statement. In terms of conventional printing systems, SPGPrints will take the opportunity at ITMA Barcelona 2019 to showcase its latest generation of laser engraving equipment and the nine colour PegasusEVO rotary screen printer.

### Stoll to exhibit alongside renowned textile institute at ISPO

Reutlingen - German flat knitting machine builder Stoll will return to the ISPO show in February where it will exhibit alongside the DITF - German Institute for Textile + Fiber Research, Europe's largest European textile research centre. Taking place from 3 to 6 February in Munich, Stoll will present a fully automated production and development process using a digitized 3D CAD model.

"The combination of Stoll's 3D flat knitting technology, the Stoll knitelligence software package and the DITF automatization tool for processing 3D CAD models to 2D knitting data will influence future product development and production processes," Stoll said. "The DITF is renowned for its research competence and pioneering role for industry 4.0 in the textile supply chain while Stoll provides state of the art 3D knitting technology and services for designers, product developers and textile manufacturers.

"Together, the DITF and Stoll create fully automated and digital integrated process solutions as a milestone for industry 4.0 in a knitting environment."

The knitelligence, networking system covers the entire value creation chain of flat-knitting production, from the design idea to development and manufacture, effectively offering tailored solutions for every component.

It has been designed to bring together products such as the flagship M1plus, APM, GKS, PPS, EKC, and autocreate in a way that allows them to interact with each other, automate processes, and network production stages. In this way, says Stoll, customers benefit from more consistent workflows, shorter, transparent production cycles, and an increase in quality, productivity, and, therefore, overall plant efficiency.

### AVGOL Launches enhanceFIT™ Breathe Range

Avgol, a global leader in the manufacture of lightweight nonwoven fabric solutions, is launching a new range of breathable fabrics which exceed the performance of current commercially available spunmelt SMS materials. The development is in line with Avgol's Forward Innovative Thinking ("FIT") strategy for new product innovation. Nick Carter, Director, Market Business Intelligence and Intellectual Property, at Avgol, said: "The enhanceFIT™ family is being developed to meet evolving product designer needs for lighter weight fabrics, having improved elasticity, barrier and breathable performance properties. This family is based on multiple technology platforms that allows Avgol to tailor fabric performance for the needs of specific markets, including hygiene, medical and industrial

enhanceFIT™ Breathe is the first in a line of new fabric solutions resulting from Avgol's recent developments in new assets and technology. The fabrics demonstrate enhanced uniformity with corresponding improvements in barrier, appearance and coverage in materials less than 25 gsm, without relying on cumbersome submicron filament fabrication methods. In practical applications, downgauged fabrics are now available that have previously required higher basis weights to achieve air permeability specifications.

applications.

### DuPont Advanced Printing Highlights "The Color Of Things To Come" At ISS Show

DuPont Advanced Printing (DuPont) will highlight its innovative digital ink offerings for textile printing during the ISS show in Long Beach, Calif., from January 18-20, 2019. Artistri<sup>®</sup> digital inks combine DuPont proprietary dispersions, polymers and ink formulations resulting in highly innovative digital inks for inkjet printing. From the brightest and richest colors to custom formulations, Artistri



## World Textile News

### Montex to unveil new developments at ITMA 2019

As the key site for the construction of Monforts finishing machines, Montex Maschinenfabrik in Austria is currently finalising the new exhibits which will be unveiled at ITMA 2019 in Barcelona this June. The company is also exploiting the many new possibilities being offered by Industry 4.0 in the continuous development of design and manufacturing methods.

"We have been working very closely with the Monforts research and development team in Mönchengladbach, Germany, to take the latest new ideas through testing and prototyping, in readiness for the exhibition and for future series production," said Montex plant manager Gert Hanzl.

"Our area is known as the 'paradise of Carinthia' due to its favourable climate. Lignite was mined up to a depth of 600 metres here until 1968. From the outset of Montex in 1982, we have specialised in all aspects of machine production, including high-precision sheet metal working, laser cutting and welding, the assembly of components, painting and shipping, along with a well-organised spare parts service," explained Hanzl.

While there is standardisation in series-produced Monforts machines, Montex is increasingly called upon to construct tailor made machines with unique designs, according to the special needs of the customers.

"We aim for the best combination of already-proven components and carefully-tested special constructions.

We are able to handle extremely large projects, having recently shipped a complete finishing line to one customer within eight weeks, and we were particularly pleased with our proven design of a challenging stenter frame with a 320-degree temperature chamber. We are currently manufacturing machines with working widths of 5.6 metres and we can produce those with widths of up to seven metres, if requested," Hanzl added.

The core Monforts machine range, including the industry standard Montex stenters, along with relaxation dryers, Thermex dyeing ranges and Monfortex/Toptex compressive shrinking ranges as well as Matex padders and Eco Applicator minimal coating units, has been significantly expanded with the acquisition of Timatec in 2015, to include a complete portfolio of coating units for virtually all applications in textiles. These have been further developed and been adapted to Monforts electrical plc-control standards and are now available as the Monforts texCoat and Allround units.

### SPGPrints to show textile printing solutions at ITMA 2019

SPGPrints, a leading company in the textile, label and industrial printing markets, is set to display the latest innovations in conventional and digital textile printing for the fashion and home-furnishing industry at ITMA 2019, from June 20-26, 2019, in Barcelona, Spain. It is the world's leading international textile and

### Iran exports \$258m carpets in 9 months

Data released by the Islamic Republic of Iran's Customs Administration shows Iranian producers exported over 12,000 tons of hand-woven carpets and handicrafts worth some \$258 million during the past nine months of the current fiscal (March 21, 2018- Dec. 21).

The figure shows a 55% rise in volume but a drastic fall of 22% in terms of value compared to the similar span of last year. Iran is among the biggest carpet exporters in the world. Persian hand-woven carpets are exported to 80 countries.

Some 5,400 tons of hand-woven carpets worth \$424 million were exported during the past fiscal year (March 2017-2018), indicating a 18.11% growth compared to the year before.

### Iran's import ban to hit Turkish firms

The Iranian parliament's recent decision to impose a ban on the import of certain products will have a significant impact on Turkey's exports to the country, a business association has warned.

"The parliament in Iran approved a bill [on Jan. 20] which bans the import of goods that are locally produced enough to meet domestic consumption. This decision will hurt trade ties between Turkey and Iran," said Fatih Çayabatmaz, the representative of the Independent Industrialists' and Businessmen's Association (MÜSİAD) in Tehran.

Çayabatmaz reminded that at the beginning of 2018, Iran imposed a ban on nearly 1,399 products in the face of the U.S. sanctions.

"The preferential trade agreement between Turkey and Iran came into effect in 2015. However, because of the 2018 ban, Iran also banned the import of 61 Turkish products that were included in the trade agreement," he said.

Çayabatmaz added that because of the 2018 ban, Turkey's exports to Iran declined as much as 30 percent and the association had applied to the Trade Promotion Organization of Iran, demanding the lifting of the ban on the 61 Turkish products.

"Turkey's exports to Iran may decline further because of the latest decision by the Iranian parliament," Çayabatmaz said.

### Chinese enterprises trying to survive in Iran despite policy shifts, US bluffs

The situation in Iran has caught a lot of Chinese and international enterprises by surprise with fast-moving shifts in the political situation related to its nuclear program.

A large number of Chinese merchants took a ride on this roller coaster. Some departed and others remained, amid the ups and downs of the mercurial international situation. A lot of foreign businesses coming to Iran for opportunities have left the country since the US withdrawal from Iranian nuclear deal, due to the resulting fluctuating interest rates, soaring rents, or simply deterred by hardline US rhetoric against Iran. US sanctions reportedly hurt the Iranian economy and devalued the Iranian rial, but also exerted some impact on Chinese firms operating in Iran. Chinese Foreign Ministry spokesperson Geng Shuang said in May 2018 that China and Iran maintain normal economic ties and trade. The leaders of Britain, Germany and France have declared their backing for the Iran nuclear deal renounced by the US. Signed in 2015 between Iran and a group of world powers - China, the US, Russia, France, the UK, Germany and the EU - the deal ended decades of economic sanctions and led to heavy investment flowing into Iran.

### Iran 's ban on clothes import continues

Iran continues the import ban on clothes, shoes and other related items in textile industry due to foreign currency limitations. "The ban on import of clothes, shoes and other textile products that are currently not necessary will strongly remain in its place," said Director General of Textile and Clothing Office of the Ministry of Industry, Mines and Trade Afsaneh Mehrabi. Iran imposed an import ban on 1,339 unnecessary products in order to protect domestic producers and manage the outflow of currency as the US sanctions hit the country. Therefore, the products are to be produced domestically instead. The banned items include clothes, sugar, cars, shoes, makeup and pharmaceuticals. The officials indicate that during past nine months of current Iranian year (started March 21, 2018), 4.600 tons of clothes worth \$48 million were exported and the clothes exports had a 24 percent rise in value and a 59 percent increase in volume.



# Iran Textile News

### Iran jumps 40 percent in textile exports

Iran was unveiled to have registered a 2 percent increase in its textile output, marking a 40 percent jump in its textile exports during the first nine months of the Iranian fiscal year. The figures were revealed by Afsaneh Mehrabi, Director General of Textile and Clothing Department at the Ministry of Industries, Mines.

The director general confirmed that "7,900 textile production units and 260,000 people are currently active in Iran's textile industry."

Mehrabi added that local producers were able to raise exports through Iran's resolution to import several products.

### Iran Industries Ministry Narrows Down List of Banned Imports

The Iranian Ministry of Industries, Mining and Trade has removed 47 commodities from the list of banned imports. Commodities allowed for import under the new directive fall under the wide-ranging categories of "auto and locomotive force", "mining affairs and mineral industries", "power and electricity", "textile and clothing", "metal and home appliances" and "agriculture".

These include apparel and footwear, automobiles, copper, lead and tin ore and concentrate, leather, ventilation fans and systems, fluorescent lighting, batteries, gas meters and industrial milk powder.

### Iranian Delegation to Bolster Economic Relations with India

Iran's Foreign Minister Mohammed Javad Zarif is expected to arrive in India.

The top Iranian diplomat, who was in India for the annual Raisina Dialogue organized by think-tank Observer Research Foundation, met India's External Affairs Minister Sushma Swaraj.

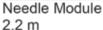
Zarif is also called on Indian Prime Minister Narendra Modi during his two-day visit.

Both sides were expected to follow up on issues discussed during Zarif's last trip to India in May 2018, when the two countries vowed to boost bilateral trade and support Iran's nuclear deal, also known as the Joint Comprehensive Plan of Action, after the United States' withdrawal from the deal and imposition of sanctions.

Iran became India's third largest oil supplier during April-June 2018 by overtaking Saudi Arabia. Total imports from Iran to India stood at \$11 billion in April-November 2018, out of which 90% of the shipments comprised crude oil.

The Indian Finance Ministry exempted rupee payments made for the purchase of Iranian oil from a staggering withholding tax. The announcement came close on the heels of Iran announcing investments to the tune of Rs 15 billion (more than \$200 million) to expand a refinery operated by Chennai Petroleum Corp., which is planning to increase oil production to 9 million tons per year from about 1 million tons at present.







DCL Dilo Compact Line, working width

In addition to wide needling lines for the economic production of large volume products as in the geotextile industry, Dilo offers a "plug-and-play" compact line which is designed for the production of small amounts of high-quality felts, used e. g. in the medical sector and for specialty felts made from high-tech fibres.

The Dilo Compact Line includes fibre opening and blending, card feeding, carding and crosslapping, needling and winding. The working width of the compact carding machine is 1.1 m, the layering width is 2.2 m. The line which was first presented at the ITMA 2015 in Milan, Italy, is characterized by consistent focusing on a compact line layout, a fast adaption to changing production conditions and an economic mode of operation. For this purpose numerous innovations were realized in every single machine. These innovations also facilitate the modifications necessary for the needling of carbon fibre.

Dilo has introduced a new "HyperTex" technology which produces multi-layer felts made from base web, reinforcing layer and upper web. By using the scrim fabric machine of Ontec Automation GmbH it is possible to integrate a grid of unconsolidated yarn or filaments between two webs. The scrim can be fed inline and is then needled together in the subsequent needle loom. A great advantage of this method is the very high production speed for the complete process. Scrim formation and subsequent needling achieve speeds up to 40 m/min.



"Hypertex" Technology, combination of Scrim fabric machine (background, OnTec) and needle loom (foreground, DILO)



### ENGINEERING FOR NONWOVENS

### DiloGroup at IDEA 2019, Miami, FL | March 26-28, 2019

Dilo is the leading equipment supplier of complete lines for staple fibre nonwoven fabric production. The most recent machine concepts from DiloGroup companies DiloTemafa, DiloSpinnbau and DiloMachines will be promoted with the emphasis on new equipment components which improve product quality, increase line capacity and furthermore enable new opportunities in nonwoven production.

DiloTemafa has introduced versions of the Baltromix bale opener and the card willow which are particularly suited to the processing of longer fibres at highest throughput. Longer cleaning intervals and shorter cleaning times also result from the design changes. The DON dosing opener remains as an intermediate between fibre preparation and the card feeder and provides a fine opening stage. DiloSpinnbau has a new "Unifeed" card feeder (VRS-P) which combines the principle of volumetric charged feeding with the characteristics of a chute feeder but without the conventional overhead trunk which allows for lower ceiling height requirement. The fibre flock matt is condensed by a vacuum delivery apron to give better uniformity of mass distribution. The distribution over the working width is controlled by additional flaps. This feeder can be adapted for medium/fine to coarse and medium to long staple fibres. The "VectorQuadroCard" incorporates a modular transfer group between breast and main section. The quick change facility of this roller group provides different carding options. The delivery system is also flexible to provide parallel laid, random or condensed web. The preopener section on this card has 4 worker/stripper pairs with five pairs on the main cylinder. Emphasis is on high throughput with good web quality.

DiloMachines has a new horizontal crosslapper version "DLSC" which allows web infeed speeds up to 200 m/min depending on fibre specification. Such infeed speeds will prevent the lapper being the line bottleneck. The DLSC works in conjunction with the proven CV1A web regulation system for improved felt evenness and the potential for fibre savings. A further increase of the drive power within the three-apron-layering technology as well as the application of carbon fibre reinforced parts enables these major improvements. A web guiding system ("extended web guide") can be added to avoid web wrinkles at lapper reversals.



Unifeed "VRS-P" and "VectorQuadroCard"

Developments underway relating to the needling process include "Needle Module Technology" whereby needles are pre-mounted in multiple units of 22 for insertion into very high-density boards. It is reducing visible marking patterns on the product's surface significantly. Furthermore, it enables a simplified Needle insertion and shorter setup time.

The 800-mm diameter cooling drum optimally and gently cools the filaments. And this has a positive influence on the yarn quality. The new cooling drum is now equipped with a V groove for all polymers (PET, PA6 and PP) as standard.

The RoTac<sup>3</sup> tangling unit, already established within the market, once again reduces the compressed air consumption by around 50%, while the newly-developed Witras III-37 winder achieves production process speeds of 3,700 m/min.

#### First intuitively-operable human-machine interface (HMI)

The new BCF S8 is the first Oerlikon Manmade Fibers segment system equipped with the innovative human-machine interface (HMI) for intelligent controlling and monitoring. In this case, the interface between man and machine has been oriented on the daily requirements of users in BCF production. With its new 'look and feel', it supports intuitive operation and offers direct access to important information as well as actual and target values at each take-up position by means of a touch screen. A completely new 'alarm philosophy' also simplifies troubleshooting and malfunction analysis. "This smart HMI system is a logical step in the digitalization of our products", explains Dr. Friedrich Lennemann, Vice President R&D Oerlikon Neumag.

#### **About Oerlikon**

Oerlikon (SIX: OERL) engineers materials, equipment and surfaces and provides expert services to enable customers to have high-performance products and systems with extended lifespans. Drawing on its key technological competencies and strong financial foundation, the Group is sustaining mid-term growth by executing three strategic drivers: addressing attractive growth markets, securing structural growth, and expanding through targeted mergers and acquisitions. A leading global technology and engineering Group, Oerlikon operates its business in two segments – Surface Solutions and Manmade Fibers – and has a global footprint of over 9 500 employees at 171 locations in 37 countries. In 2017, Oerlikon generated CHF 2.1 billion in restated sales and invested around CHF 100 million in R&D.

#### **About the Oerlikon Manmade Fibers Segment**

With its Oerlikon Barmag and Oerlikon Neumag brands, Oerlikon Manmade Fibers Segment is the world market leader for manmade fiber filament spinning systems, texturing machines, BCF systems, staple fiber systems, solutions for the production of nonwovens and – as a service provider – offers engineering solutions for the entire textile value added chain. As a future oriented company, the research and development at this division of the Oerlikon Group is driven by energy-efficiency and sustainable technologies (e-save). With the supply of continuous polycondensation and extrusion systems and their key components, the company caters to the entire process – from the monomer all the way through to the textured yarn. The product portfolio is rounded off by automation and industry 4.0 solutions. The primary markets for the products of Oerlikon Barmag are in Asia, especially in China, India and Turkey, and – for those of Oerlikon Neumag – in the USA, Asia, Turkey and Europe. Worldwide, the segment – with just under 3,000 employees – has a presence in 120 countries of production, sales and distribution and service organizations. At the R&D centers in Remscheid, Neumünster (Germany) and Suzhou (China), highly-qualified engineers, technologists and technicians develop innovative and technologically-leading products for tomorrow's world.



Caption: Oerlikon Neumag BCF S8

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Oerlikon Neumag presents world innovation at the DOMOTEX in Hanover, Germany

# Innovative BCF S8 platform technology opens up new carpet yarn industry markets for Oerlikon Neumag customers

Neumünster/Hanover, January 11, 2019 – world premiere at the DOMOTEX World Trade Fair for Carpets and Floor Coverings in Hanover: between January 11 bis 14, 2019, Oerlikon Neumag will be showcasing its innovative new development, the BCF S8, to a wide audience for the very first time in Hall 11, Stand B36. Whether commodities or niche products – the new BCF S8 platform technology offers manufacturers of BCF carpet yarns decisive arguments for responding to constantly rising cost pressures and the trend for greater efficiency and quality in fiercely-competitive markets. World record: the system achieves never-seen-before spinning speeds and is able to simultaneously spin up to 700 filaments and produce fine titers of up to 2.5 dpf. This superlative performance is guaranteed by numerous individual innovations in the new platform and, for the first time, also in a new human-machine interface (HMI)-based control system, which opens the door to the digital age of smart carpet yarn manufacturing wide. At the ITMA ASIA 2018, the Oerlikon Manmade Fibers segment had already announced that it would be presenting revolutionary solutions in 2019 – both in hardware and software. And the DOMOTEX marks only the start.

According to manufacturer information, the new BCF S8 is the most efficient Oerlikon Neumag BCF system of all times. "We have succeeded in achieving a new level of greater productivity and even broader product diversity. These allow our clientèle to better cater to changing market requirements and achieve a competitive edge in tough market conditions", explains Martin Rademacher, Vice President Sales Oerlikon Neumag. As a pre-taste, the machine specialists from Neumünster are serving up performance figures and results from comprehensive trials conducted at their own BCF technology center as well as from two pilot systems which have been tried and tested within the market for months now.

### **BCF S8 performance in numbers**

With up to 700 potential filaments per yarn end, the BCF S8 is raising the benchmark considerably compared to the Oerlikon Neumag S+ BCF system (400 filaments) that has dominated the global market to date. Oerlikon Neumag guarantees fine titers of up to 2.5 dpf. Furthermore, the process speed is higher than ever before – 3,700 m/min (winder speed). This permits throughputs of up to 15 percent greater compared to predecessor technologies. Overall, system efficiency is 99 percent – almost unbeatable. True to the Oerlikon Segments Manmade Fibers segment e-save philosophy, energy savings of up to 5 percent per kilogram of yarn are achievable.

#### BCF S8 innovations – from straight yarn paths to large cooling drums

This comprehensive progress has been achieved with numerous smart innovations. To this end, one key element above all has been optimized. The yarn path from the spinning system to the new, large cooling drum has now been almost completely straightened. This yarn path, unique to the BCF market to date, ensures that the individual filaments are subjected to minimum friction, hence once again considerably reducing yarn breaks and optimizing the overall production process. Especially noteworthy here are the, for the first time, straight yarn inlet in the texturing head – guaranteeing superior yarn quality.

And the considerably reduced distance between the heating godet duo and the texturing head also has a positive impact on the texturing process. It ensures a more even twist to the yarn and reduces the compressed air consumption. Furthermore, the texturing chambers can be removed individually, which additionally shortens servicing times. The now closed units also provide the best possible protection for the texturing jets and lamellar chambers.