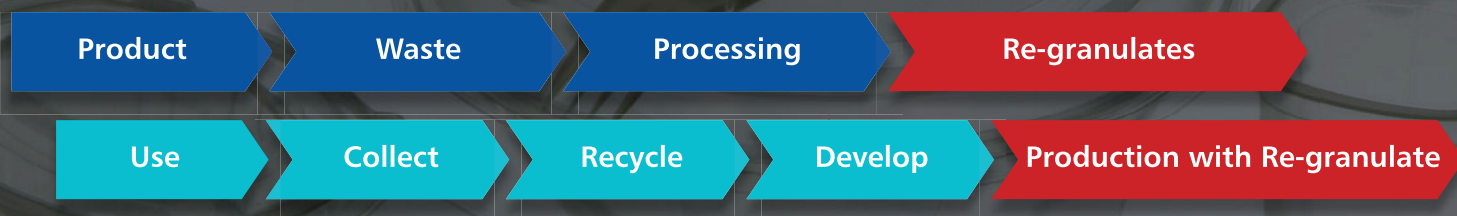


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www.battenfeld-cincinnati.com

Profile guillotine PTT-200

INNOVATION



Especially for complex as well massive profiles.

Basic construction consists a frame in solid Aluminum construction in which the controls are integrated.

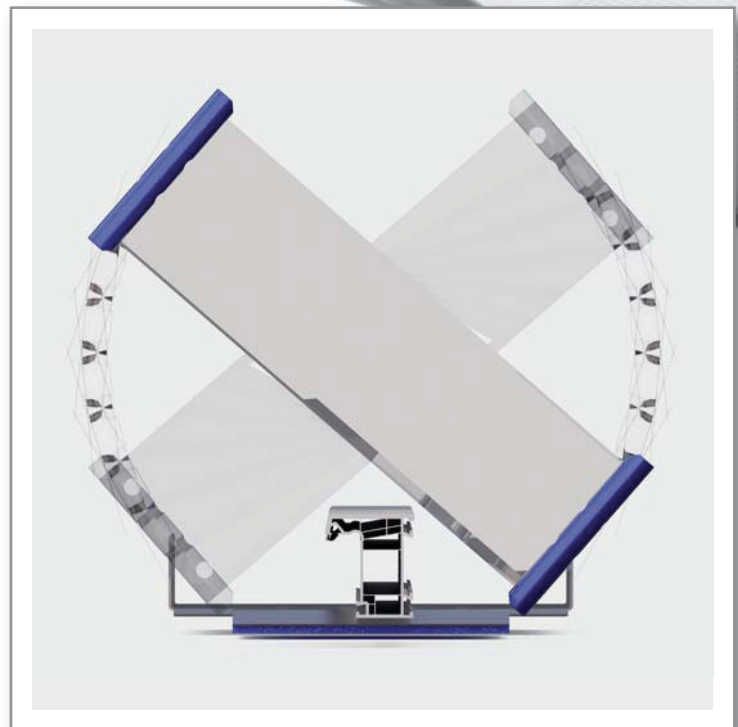
Through large sliding windows fast and comfortable access to the cutting unit.

Particularities:

For this special version of the cutting knife head the cutting knife can be set in any position. This allows the slope of the knife to the respective profile geometry optimally adapted become.

A new clamping system, which fix the knife at 4 points. It allows more pulling force on the blade to cut more massive profiles.

The new clamping system result in a much higher angular accuracy of the cut.



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Germany

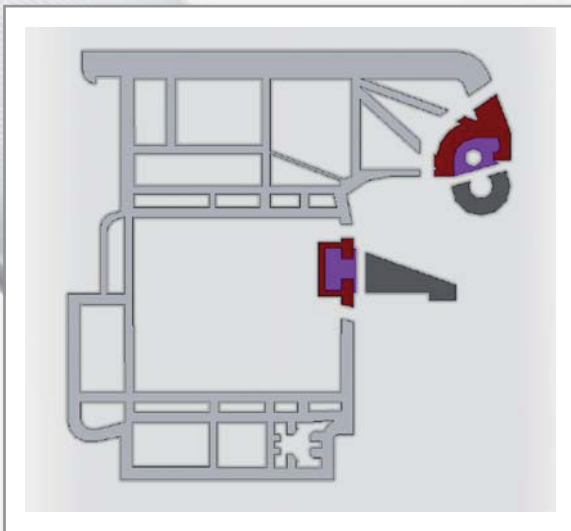
PCL Profile separating machine



When profiles are extruded, start-up profiles occur again and again. They are representing a high material value. It is very labour intensive to recycle this profiles.

With the PCL profile separating machine from Stein Maschinenbau, this process is greatly facilitated and accelerated many times over.

Thanks to its quickly exchangeable cutting units, as well as the two powerful caterpillars, the PCL can cope with any profile and allows you to recycle your profiles in the best possible way. By non-cutting separators, the profile is split into individual Material fractions which are optimally recyclable. Smaller sections are sorted and granulated directly in the machine.



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stein@stein-maschinenbau.de
www.stein-maschinenbau.de

**The PCL from Stein Maschinenbau
separates YOUR profiles!**

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40 CHINAPLAS, to be held during April 13-16 in Shenzhen, PR China, together with a series of exciting concurrent events, to explore hot topics like 5G, digital manufacturing, circular economy, antibacterial & sterilization etc. with the shareholders in the industries



Plastiblow, among the first in the sector to develop electric machines for low energy consumption extrusion blow molding, has long been committed to the reduction of the use of virgin plastic, because it has developed multilayer co-extrusion technologies capable of processing more recycled materials for the production of new containers **32**



When it comes the production of CPP film, there is a clear trend towards high-volume production. But is the ability of to manufacture high quantities at good qualities alone enough to get the edge in today's markets? SML has the answer **45**



31 OCS relaunched the Liquid Analyser LA20 with the state-of-the art inspection technology. With its modern design and the use of innovative camera technology, the smallest impurities in liquids can be detected and analysed with the help of the hardware and software components supplied

In the last 20 years, numerous actions have been undertaken to modernize traditional networks, this article aims to analyze some of the most important reasons why, in many of these actions, replacements and renovations of important sections of pipes made of different materials are being undertaken and why,

34 in many of these cases, Oriented PVC (PVC-O), TOM® Pipes from Molecor are being used

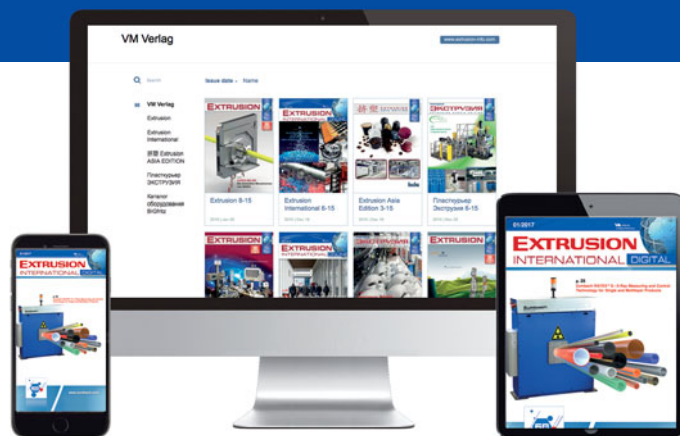


Beverage brand owners worldwide rely on the LSP technology of Next Generation Recyclingmaschinen (NGR) for the processing of post-consumer PET. In order to meet the growing interest, a further LSP plant has been available for demonstration and testing purposes since March 2021 **29**



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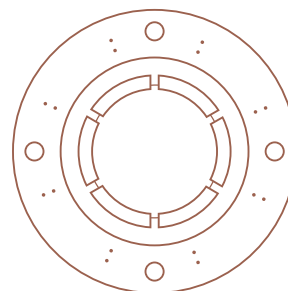
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CHINAPLAS

13. - 16. 04. 2021
Shenzen, P.R. China
www.ChinaplasOnline.com

Plastics Extrusion World Expo Europe

01. - 02. 06. 2021
Essen, Germany
<https://eu.extrusion-expo.com/>

wire Russia, Tube Russia

08. - 10. 06. 2021
Moscow, Russia
www.wire-russia.com,
www.Tube-russia.com

rosplast

15. - 17. 06. 2021
Moscow, Russia
rosmould.ru.messefrankfurt.com/

Plastics & Rubber Vietnam

16. - 18. 06. 2021
Ho Chi Minh City, Vietnam
www.k-globalgate.com/prv

COLOMBIAPLAST

22. - 25. 06. 2021
Bogotá, Colombia
www.colombiaplast.org

SCHWEISSEN & SCHNEIDEN

13. - 17. 09. 2021
Essen, Germany
www.schweissen-schneiden.com

Equiplast

14. - 18. 09. 2021
Barcelona, Spain
www.equiplast.com/en

interplas

28. - 30. 09. 2021
Birmingham, United Kingdom
www.interplasuk.com

K 2022 – Registration Documents Available



19 - 26 October, Düsseldorf, Germany

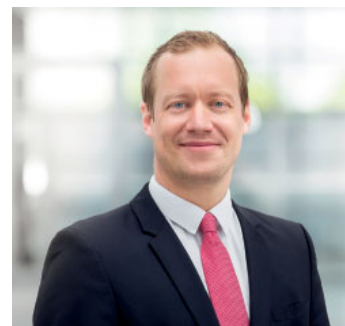
■ With immediate effect the registration documents for K 2022 will be available. The deadline for registration for all the companies wishing to participate in K 2022 is 21 May 2021.

The ranges on show at K 2022 include the segments machinery and equipment, raw materials and auxiliaries as well as semi-finished products, technical components and reinforced plastic products. October 2022 will be the perfect timing for the No. 1 trade fair because the effects of the global pandemic have also hit many enterprises from the plastics and rubber sector as well as their customer industries. Therefore, there will be an enormous demand for personal exchange and re-orientation on a global scale in the international plastics and rubber industry.

K in Düsseldorf also always addresses the current challenges of our day and age and specifically of your industry. This is why such subjects as sustainability, resource savings, circular economy and digitalisation, which gathered momentum at K 2019, will also feature among the "hot tickets" of the trade fair at both the exhibitors' stands and side events. Worth a special mention here is the Special Show entitled "Plastics shape the future" as well as the Science Campus as a forum for science and research. The registration documents for K 2022 can be downloaded from:

► www.k-online.com/2330

Change in Management



Daniel Ryfisch

■ It is all about continuity and renewal, two contradictory terms, which against the backdrop of the current economic situation in times of fast-paced change, however, are perfectly complementary. And this is why Messe Düsseldorf has decided to reorganise the team in charge of its biggest portfolio of wire, Tube & Flow Technologies with around 15 trade fairs in six countries. Since 1 September 2020 Daniel Ryfisch has served as Project Director for the global No. trade fairs wire, Tube and VALVE WORLD EXPO and their international satellites in China, Thailand, Brazil, Russia and India now. This means he is responsible for both the strategic orientation of the trade fair themes and the expansion of the exhibition business abroad.

Since 2015 Daniel Ryfisch has already been in charge of wire and Tube on the operational level as Deputy Director.

► [Messe Düsseldorf GmbH](http://www.messe-duesseldorf.de)
www.messe-duesseldorf.de

Fakuma 2021 – Future Issues

■ In addition to the digital transformation, shifting from a linear to a circular economy is also a key issue for the plastics processing industry. And this is why the 27th Fakuma international trade fair for plastics processing, which will be held in Friedrichshafen from 12 to 16 October 2021, is generating special interest.

German plastics processors are in pole position because they're facing up to the challenges resulting from change at various levels. And thus Fakuma will be an exceptional trade fair experience with forward-looking issues and sustainable solutions. The digital transformation is pressing ahead at full bore – thanks to increasing digitalisation and automation, companies are optimising processes, increasing equipment availability and improving productivity, all of which ultimately secures future viability. The shift from a linear to a circular economy is also highly challenge and by no means trivial: plastics recycling is not just a buzzword – on the contrary, it's generating opportunities and markets worldwide. Key issues for plastics processors include the recyclability of their own products on the one hand, as well as the use of recycled materials on the other. Performance, quality and hygiene requirements must be fulfilled in equal measure in this regard. At the same time, the industry is struggling in many areas with a lopsided, negative image. Julia Große-Wilde, Managing Director of the German Association of Plastics Converters (GKV) clarifies: "We can't do without plastics if we want to achieve our climate goals – on the contrary, they're important to this end!"

The primary reason for the negative image is worldwide discharge of waste into the environment. As the voice of the in-

dustry and its intermediary, the GKV is thus increasingly engaging in dialogue and education, because as Julia Große-Wilde points out, there can be no doubt that plastics also have ecological advantages: "The companies themselves have a vested interest in making their products fit for the future. Minimising and recycling production waste don't just make good ecological sense, they're economically meaningful objectives as well. Furthermore, the end of the respective product's service life is being taken into consideration to an ever greater extent during the product design phase," explains the managing director of the GKV. She observes that the protective function of packaging is rarely perceived or appreciated. "Packaging contributes a great deal to making consumption more sustainable. Spoiled food which ends up in the bin instead of on our dinner plates is more harmful to the climate than the production of the required packaging. In fact, however, we need to ensure that plastics play a more significant role within the flow of materials by means of design for recycling, consistent collection and sorting, as well as continuous further development where recycling and the use of recyclates are concerned. This is the great challenge for our industry, as well as for our society."

Up through opening day for the on-site event in October, Fakuma-Virtual can be taken advantage of as a useful tool for exchanging technical ideas and experience.

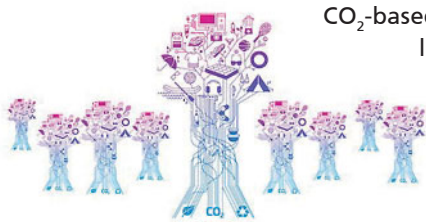


► P. E. Schall GmbH & Co. KG
www.Fakuma-Messe.de
www.fakuma-messe.de/fakuma-virtuell/

„Renewable Materials Conference 2021“

■ Which renewable materials are solutions that meet the needs of future societies? As a response to this challenging question, nova-Institut has decided to unite all relevant industries in this new conference, May 18–20, 2021, featuring a unique concept to present all renewable material solutions at one event: bio-based, CO₂-based and recycled. There is a growing market demand for advanced and ready-to-use renewable material solutions with a low carbon footprint – that are fossil-free.

For the first time, nova-Institut jointly presents all renewable material solutions: bio-based, CO₂-based and recycled. Highlights and innovations of bio- and CO₂-based chemicals and materials, and of chemical



recycling will be presented. Or in other words: All material solutions based on renewable carbon – avoiding the use of additional fossil carbon.

The conference will be held as an online event, which offers unique networking possibilities to the participants with the help of an innovative conference software from Finland.

For the first time, the innovation award "Renewable Material of the Year" will be awarded to the most exciting new materials made from renewable carbon.

The nominees will present their innovation in a 10-minute presentation to the audience on the second day of the Renewable Materials Conference (19 May 2021). The audience will vote online for the three winners. The innovation award is sponsored by Covestro (DE).

► nova-Institut GmbH
www.nova-institut.eu
www.renewable-materials.eu

Global Gate Portfolio for Plastics and Rubber Expanded

■ On December 30, 2020, Messe Düsseldorf and Corferias (the International Business and Exhibition Center of Bogota) signed an agreement with Acoplásticos (Asociación Colombiana de Industrias Plásticas) to purchase a share of and jointly organize COLOMBIAPLAST, one of the most important international trade fair for the plastics, rubber, petrochemical and packaging industry in the LatAm region. Accordingly, Messe Düsseldorf – through its subsidiary Messe Düsseldorf North America (Chicago, USA) – acquires an equal share in COLOMBIAPLAST and becomes involved in organizing the event. Messe Düsseldorf is renowned as the organizer of K, The World's No.1 Trade Fair for Plastics and Rubber, held every

three years in Düsseldorf, Germany. With this agreement, Messe Düsseldorf adds COLOMBIAPLAST to its "Global Gate" portfolio of plastics and rubber trade fairs. Messe Düsseldorf's expertise in organizing plastics and rubber trade fairs around the world together with its extensive network of sales offices and subsidiaries in 141 countries will increase international participation at COLOMBIAPLAST and help to grow the trade show. The next edition is scheduled for June 22 to 25, 2021 at Corferias in Bogota, Colombia.

► **Messe Düsseldorf GmbH**
www.messe-duesseldorf.de
www.k-globalgate.com

Positive Dynamics

■ Regardless of global economic tremors caused by the COVID-19 pandemic R&P POLYPLASTIC managed to maintain the sales amount on the level of 2019. The enterprise increased profitability, implemented a number of large-scale projects and shaped plans for the future.

"When we were planning for the year 2020 of course no one could assume that there would be the pandemic and lockdown – we hoped to come close to 100 thousand tons of produced and sold materials. However, coronavirus made some corrections, which nevertheless did not stop us from

achieving a very decent result. We managed to maintain our sales amounts on the level of 90 thousand tons, increase our revenue by 9% and EBITDA margin by 12.6%," said Andrey Menshov, managing partner of R&P POLYPLASTIC.

"For me the most important outcome of 2020 is that we managed to realize all our targets in key areas of activities and preserve jobs without decreasing the payroll rate – today's staff size is 576. Workforce productivity is constantly rising and last year grew by 12.2%," noted Alexander Pavlov, Director General of R&P POLYPLASTIC.

► **POLYPLASTIC**
www.polyplastic-compounds.ru/eng/

Distribution in Spain taken over

■ ETTLINGER, a member of the MAAG Group and a leading manufacturer of high performance melt filters, is now relying on the extensive experience and capabilities of MIRCAN 1979 S.L., Barcelona, for the distribution of its systems on the Iberian Peninsula.

The team of MIRCAN, ETTLINGER's new partner for the distribution of high performance melt filters on the Iberian Peninsula (Note: This image is from the pre-Corona period. © MIRCAN)



The family-owned company MIRCAN is a solution provider with over 40 years of experience in the production and quality control of polymers and their processing by extrusion. In addition to international companies, customers include many small and medium-sized enterprises. In this environment, MIRCAN sells gear pumps, screen changers and melt filters, wide slot dies and coextrusion feedblocks, measuring systems, web inspection and pellet quality control systems, pressure and temperature sensors, and equipment for viscosity and color measurement. The company has been a MAAG sales partner since it was founded.

MIRCAN now complements its portfolio with ETTLINGER's continuously operating high performance melt filters which, with their patented principle, are used worldwide for the filtration of low to very highly contaminated plastic melts. The two series ERF and ECO find applications for almost all common polymers in the recycling sector, the sheet and film industry, tape and fiber production up to compounding – also as retrofit components for existing extrusion lines.

► **Ettlinger Kunststoffmaschinen GmbH**
www.maag.com

MIRCAN 1979 S.L.
www.mircan1979.com

New Assembly Line for Roller Chain Systems

■ The Brückner Group, together with their daughter company Brückner Maschinenbau, operates the world's largest component assembly plant for biaxially oriented film production lines at its Topoľčany site in Slovakia. A new assembly line for roller chain systems has now been commissioned there. During the stretching of plastic films, these special systems transport the film web through an oven-like device and stretch it by a factor of up to 10. In the process, enormous stretching forces have to be absorbed, especially in the case of polyester films (BOPET), which are transmitted by so-called clips. The roller chain systems are therefore of decisive importance in the more than 150 m long lines.

The new assembly line enables the production of over 10,000 clips per month, a capacity increase of a good 30%. Automation solutions and quality assurance tools specially developed for assembly processes of this kind are responsible for the high throughput combined with high quality: Poka-Yoke measures in components and assembly fixtures; Force-displacement monitoring in joining processes; Torque and



Brückner's Slovakia – assembly plant for biaxially oriented film production lines

rotation angle monitoring; Positioning of components by means of robots with optical systems; Completeness and dimensional checks with optical measuring systems; Automatic recording of process data with statistical evaluation.

■ Brückner Gruppe
www.brueckner.com

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Cooperation Intensified

■ The cooperation between the Cologne-based company BIO-FED and Febo S.p.A., which was already started in 2016, will be further intensified in 2021. In addition to the exclusivity for Italy and extension for Febo's subsidiary Febo 3R, the distributor will now also receive exclusive distribution rights for the Greek market for Febo Hellas.

BIO-FED produces and sells biodegradable and/or biobased plastic compounds. Furthermore, the company has a state-of-the-art R&D department that is focused on innovation.

"The market for bioplastics has grown significantly in recent years, especially in southern European countries, due to the relevant legislation," says Dr Stanislaw Haftka, Sales Director at BIO-FED.

"With Febo, we have a competent and experienced partner at our side in these regions who can take over our extensive customer base and provide individual on-site support," Haftka continues.

"By working with BIO-FED, Febo can better meet the needs of the growing market every day, focusing even more on sustainable products," says Febo S.p.A.'s Sales and Marketing Manager Cristiano Micheletti.

Febo will distribute the complete M•VERA® product range for blown film extrusion, injection moulding and extrusion appli-



Cristiano Micheletti, Sales and Marketing Manager at Febo S.p.A.



Dr. Stanislaw Haftka, Sales Director at BIO-FED

cations in Italy and Greece, as well as the matching biodegradable AF-Eco® biomasterbatches. M•VERA® compounds for other processing technologies are currently under development. BIO-FED and Febo are optimistic that this cooperation will create new synergies and more opportunities in a market that is constantly evolving and growing.

► **BIO-FED, Zweigniederlassung der AKRO-PLASTIC GmbH**
www.bio-fed.com

FEBO S.P.A.
www.febo.it

Plastics Market Turbulence

■ Turbulence on Europe's polymer markets is hitting plastics processors in the region with full force. Sufficient quantities of granulate are unavailable and prices have risen significantly since the beginning of the year, with some approaching all-time highs.

Plastics Information Europe (PIE) reports that production bottlenecks for plastics and their intermediate products have in some cases cut the quantity available by up to half of the amount normally on the market. In Europe, polymer producers are currently dealing with 13 forces majeures, 11 system malfunctions, 22 slowdowns and 24 maintenance shutdowns. At the same time, plastics goods producers face significantly lower imports from Asia, the Middle East and the US. Resin prices in the Far East have outpaced those in Europe for months, which has redirected much of the global flow of raw plastics from Europe to Asia.

The combination of reduced supply and increasing demand is boosting prices for plastic granulate at an unprecedented rate. Depending on type, materials currently cost 20 to 50% more than at the beginning of 2021. This shift poses major economic difficulties for plastics processors, who often have long-term contracts with their customers. Clauses for cost increases can only cushion the problems to a limited extent, due to the speed of price hikes.

Supply bottlenecks for materials are also endangering the production of end-products made of plastics. Isolated reports from the plastic packaging sector talk about limited delivery capabilities.

In early March, a webinar held by PIE's sister publication Kunststoff Information (KI, Germany; www.kiweb.de) about the price and quantity situation provided insight into the current circumstances. More than 700 participants from across the plastics industry signed on to hear from experts and take part in a Q&A session. Of the more than 400 plastics processors on hand for the discussions, 77% admitted that they were affected by turbulence on the plastics markets, and 44% said the impact has been either severe or very severe. Almost half of the end producers said they were facing production downtimes due to the shortage of materials. Little chance for improvement seems forthcoming: some 70% of plastics processors said the market situation will not normalise before the third quarter. Webinar participants from the plastics and chemical production industries were even more pessimistic: 64% said market normalisation was due in the third quarter, with 29% saying it will take until the final three months of 2021.

There is, however, one consolation for plastics processors: Competing materials such as steel and paper are also currently struggling with difficult market developments. And in many application areas, as the pandemic has shown, plastics are simply irreplaceable.

► **Plastics Information Europe**
www.pieweb.com

New Partner to Support Future Growth Announced

■ Logoplaste, a leading global designer and manufacturer of innovative and sustainable rigid plastic packaging solutions for the world's premier FMCG brands, announced that Ontario Teachers' Pension Plan Board (Ontario Teachers') has agreed to acquire The Carlyle Group's majority stake in the company. Current Logoplaste shareholders Filipe de Botton and Alexandre Relvas will retain their approximately 40% stake in the business as it embarks on its next phase of growth. The financial terms of the transaction, which are subject to customary regulatory approvals, were not disclosed.

Logoplaste's value-added rigid plastic packaging solutions are used by a wide range of global blue-chip clients. The company offers unique expertise across all phases of packaging development, from ideation, design and engineering to full industrial implementation. Logoplaste's business model centres on the development of strong and long-standing partnerships with customers through dedicated facilities, fully integrated within the customer's premises, eliminating secondary packaging waste, just-in-time operations and significantly reducing transport needs. Sustainability and innovation have been integral to Logoplaste since inception and are key to its continued success.

■ Logoplaste
www.logoplaste.com

Acquisition

■ Milliken & Company has formally acquired Zebra-chem GmbH, a global chemicals company known for its peroxide and blowing agent masterbatches. With more brands and governments globally setting goals to increase their use of recycled materials, plastics manufacturers are faced with the challenges of using recycled plastics effectively. Peroxide masterbatches, like those from Zebra-chem and Milliken, make it possible to incorporate up to 100% recycled content into these new plastics.

Headquartered in Bad Bentheim, Germany, Zebra-chem carries a respected portfolio of chemical blowing agent and peroxide masterbatches for application in most thermoplastics and engineering plastics.

Combining the strengths of Milliken and Zebra-chem opens up new potential to expand solutions that accelerate and improve plastic recycling. Customers will benefit from enhanced research and development capabilities, shared knowledge, and a broadened product portfolio from trusted, leading manufacturers.

■ Milliken & Company
www.milliken.com

Zebra-chem GmbH
zebra-chem.com



TST counter-rotating with Alessandro and Elio Zambello

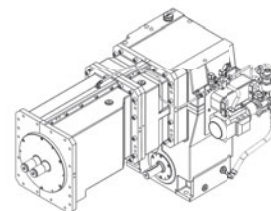
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www.zambello.com

COLOUR VISION N°21

■ Just in time for the start of the new year, Gabriel-Chemie presents the 21st edition of the successful COLOUR VISION colour and trend series. In the world of plastics, the Colour Vision collection is considered as a source of inspiration for product and colour concepts for brand manufacturers, consumer goods and industrial designers as well as plastic processors. Every year experienced trend scouts and innovative colourists actively work on the trends of tomorrow in order to be able to create a new COLOUR VISION collection.

This year's Colour Vision collection is characterised by a multitude of optical and haptical special effects in a combination of marbling and laser marking as well as unique effect and natural colours. In uncertain times like these, the "Re-wake your senses" and "Re-ignite your spirit" themes are meant to reflect a new start and give people courage and confidence for the future.

With the "Re-wake your senses" series, Gabriel-Chemie demonstrates the enhancement of plastic surfaces through haptic effects via its unique laser marking. Customisable, safe

and sustainable – easy to implement at the touch of a button on the computer.

With „Re-ignite your spirit“, Gabriel-Chemie highlights the positive changes and embraces this new lifestyle through modern effect colours that visualise sustainable metalisation in plastic.

New innovation topics are worked out annually through the analysis of new colour trends from different industrial sectors and the consideration of social influences in the market. These issues are visualised using lens plates.



(© Gabriel-Chemie)

► Gabriel-Chemie Gesellschaft m.b.H.
www.gabriel-chemie.com

50 Million Euros a Year for Recycling

■ In 2018, the packaging and recycling specialist the ALPLA Group signed the Global Commitment of the New Plastics Economy (an initiative of the Ellen MacArthur Foundation) and committed to spending a total of 50 million euros to expand its recycling activities up to 2025. ALPLA is now significantly increasing this investment target. From 2021, an average of 50 million euros a year will be ring-fenced specifically for recycling.

"We have been very active in the past two years. We succeeded in initiating bottle-to-bottle projects around the world, including in Asia, Europe and Central America. We nevertheless continue to see increasing demand on the part of our customers all over the world," explains Georg Lässer, Head of Corporate Recycling at ALPLA. This sustained demand gives ALPLA the opportunity to kick-start further investment projects, says Lässer. Günther Lehner, Chairman of the Company Advisory

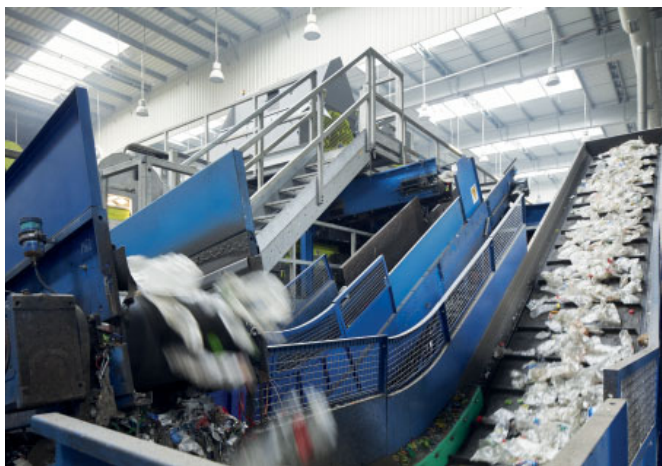
The ALPLA Group will invest an average of 50 million euros a year up to 2025 on expanding and globalising its recycling activities (Copyright: ALPLA)



Board, stresses that the company will focus on high-quality application areas in new regions: "Our aim is to establish a bottle-to-bottle cycle – including in regions in which the recycling of waste does not currently play a large part."

Its move into HDPE recycling in 2019 represents another milestone for ALPLA. This is being continued with the construction of a plant in Toluca, Mexico, which is scheduled to go into production in autumn 2021. The company is also currently creating a PET and HDPE recycling plant in Thailand together with a cooperation partner. Capacities at the existing plants in Austria, Poland and Germany have been expanded over the past two years and just recently, ALPLA announced the installation of an rPET extrusion system at one of its own preform plants in Italy. In all, the annual capacity of the ALPLA recycling companies, joint ventures and partnerships amounts to approximately 130,000 tonnes of PET and 60,000 tonnes of PE.

► ALPLA Werke Alwin Lehner GmbH & Co KG
www.alpla.com



Cooperation

■ Hamburg-based plastics distributor K.D. Feddersen is now distributing polyamide compounds from Ascend Performance Materials, the world's largest fully integrated manufacturer of polyamide 6.6, in Germany and most other European countries. In addition to Vydine® (PA 6.6, PA 6) the product portfolio also includes the new HiDura® Long-Chain PA 6.10/6.12 series. The Ascend product families consists of non-reinforced, reinforced, impact modified and flame retardant engineered plastics as well as special formulations for extrusion and injection moulding.

"We are pleased to have gained a strong partner in Ascend, a leader in the field of engineering plastics, which completes our product portfolio with polyamide compounds for our customers. This cooperation follows our strategy of offering our customers an integral technical product solutions portfolio of high quality for a wide range of segments and requirements such as automotive, E&E, e-mobility as well as industrial," says Dr. Stephan Schnell, Managing Director of K.D. Feddersen GmbH & Co. KG.

■ K.D. Feddersen GmbH & Co. KG
www.kdfeddersen.com

Changes to the Management Board

■ Plastics processor Ensinger is seeing some changes at the top: at his own request, Klaus Ensinger is giving up his operational management role and therefore his seat on the Ensinger GmbH Management Board. He will, however, continue to provide support to strategic projects and be a member of supervisory bodies.

The Management Board now consists of three people: Dr. Roland Reber, Dr. Oliver Frey and Ralph Pernizsak. Ralph Pernizsak was appointed Managing Director on first of April, 2020.

■ Ensinger GmbH
www.ensingerplastics.com

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New Subsidiary in Poland



Sumika Polymer Compounds Europe continues its growth and announces the creation of a new subsidiary in Poznan, Poland

■ The board gives its green light to this new company to be set up this year in Poland: “Sumika Polymer Compounds Poland Sp.z o.o.” (SPCP). With historical locations in France

and UK, as well as the recent acquisitions in Turkey and this creation in Poland, SPC is able to cover the whole of Europe and reduce carbon emissions from transport by delivering locally.

SPC EU proudly announces creation of a new branch in Poznan. The city located in the west of the country has easy access to the motorway network. One particular strength of the location is its proximity to their customers in Poland as well as in Germany and Czech Republic: a highly industrialized geographical area containing many manufacturers of automobiles and white goods appliances. SPC EU’s overall expansion strategy is to promote adequate-sized units as close as possible to their business partners.

Demand for PP compounds in the area is expected to continue to grow solidly with the spread of electric vehicles due to the tightening of environmental regulations. A new production site of about 5500 square meters will be dedicated to compounded polypropylene manufacturing.

► Sumika Polymer Compounds Europe Ltd
www.sumikaeurope.com

Distributor in Italy Appointed

■ Effective May 1, 2021, Solvay’s Udel® PSU, Radel® PPSU and Veradel® PESU specialty polymers will be available in Italy through Nevicolor S.p.A.

“Nevicolor is our long-standing distribution partner in Italy, providing coverage across all regions of the peninsula,” said Dries Steijnen Manager Channel Partners Sales EMEA. “The addition of Udel® PSU, Radel® PPSU and Veradel® PESU provides our Italian customers the industry’s broadest offering of sulfone-based polymers, and Nevicolor has the supply chain, technical and logistical service levels to immediately meet their needs.”

Nevicolor began distributing Solvay’s specialty polymers in Italy 35 years ago, and their portfolio will now include:

- Sulfone polymers: Udel® PSU, Radel® PPSU and Veradel® PESU
- Semi-crystalline polymers: Amodel® PPA, Ryton® PPS, Ixef® PARA, Omnix® HPPA and Kalix® HPPA
- Aromatic polyketones: KetaSpire® PEEK and AvaSpire® PAEK
- Fluoropolymers: Hyflon® PFA/MFA, Solef® PVDF, Halar® ECTFE and Tecnoflon® FKM
- Long fiber thermoplastics: Xencor™ LFT structural polymers

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► Solvay
www.solvay.com

Nevicolor
www.nevicolor.it

Modular Ozone Converter Catalytic Air Purifier Launched

■ Baldwin Technology’s Ahlbrandt has launched the highly efficient Ozone Converter Catalytic Air Purifier (CAP), which cleans exhaust air from corona surface treatment systems. With a catalyst bed of metal oxides, the CAP ensures an ozone-free, environmentally friendly production facility.

Featuring a compact, durable design, the CAP also is modular for easy maintenance and expansion, if needed. As requirements and production conditions change, the catalyst volume is adapted to the exhaust volume of the installed corona surface treatment system. Additionally, the catalyst filter is designed without active carbon, making it non-flammable and very safe, especially when running in high temperatures.

“The new Ozone Converter CAP for corona surface treatment systems is designed to be both very efficient and environmentally conscious, supporting human health and safety,” said Holger Bätz, Production Manager for Ahlbrandt. “These are important values, reflected in all of Ahlbrandt’s technologies and throughout our organization.”

► BALDWIN TECHNOLOGY COMPANY INC.
baldwintech.com

Distinguishing PA6 from PA66 at the Push of a Button

■ trinamiX, a wholly owned subsidiary of BASF SE, now supports the reliable differentiation between polyamide 6 (PA6) and polyamide 6.6 (PA66) with its Mobile Near-Infrared Spectroscopy Solution. Within seconds, plastic waste from the two polyamides can be sorted using a handy measuring device as part of trinamiX's solution. With this new application, trinamiX is responding to customer wishes and expands its broad offering for plastic sorting.

PA6 and PA66 belong to the most sought-after engineering plastics. Thanks to their robustness, they are suitable for a wide range of applications. Since PA6 and PA66 have similar properties, they are used interchangeably in numerous applications – and it is virtually impossible to distinguish them with the naked eye. At the same time, the separation of PA6 and PA66 has gained traction in recent years in light of growing requirements within the recycling industry. As a result, the production of high-quality single-grade plastic recyclates – including PA6 and PA66 – is becoming increasingly lucrative.

Besides the recycling industry, plastics processing companies who rely on PA6 and PA66 in their products also benefit from trinamiX's new application. They are now enabled to perform a clean separation of PA6 and PA66 production rejects or waste. In-house recycling processes can thus be geared towards an optimized and more efficient use of valuable resources.

In addition to distinguishing PA6 and PA66, trinamiX Mobile NIR Spectroscopy Solution can already identify all common plastics – from classic polyolefins such as PE and PP, to PET (polyethylene terephthalate) and engineering plastics such as ABS (acrylonitrile butadiene styrene). Recycling companies as well as manufacturers, traders and processors of goods made from recyclate benefit from a flexible and mobile solution that offers user-oriented applications for the sorting of plastic components and packaging materials.

Launched last year, trinamiX's solution combines robust hardware with intelligent data analysis and a mobile app. NIR spectroscopy is a proven technology that trinamiX has integrated into a portable format for on-site analysis. In doing so, trinamiX relies on cloud-based data processing, which ensures continuous development of the solution – there is no need to replace hardware. This way, trinamiX can continuously develop new applications and react flexibly to new challenges in the field of plastic sorting – while working closely together with customers as in the case of its new PA6/PA66 application.

■ trinamiX GmbH
www.trinamiXsensing.com

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New-Generation Water-Ring Pelletizer

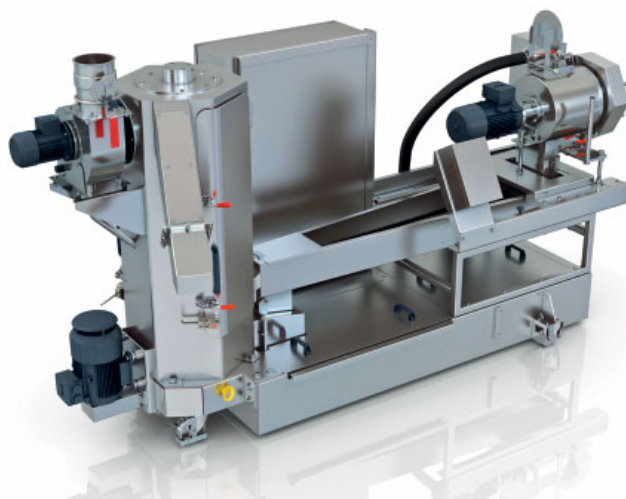
■ A new-generation water-ring pelletizer (WRP) from Nordson Corporation provides uniform polymer flow, efficient heating, quick die plate change, and low dryer noise, enabling compounders and recyclers to increase productivity and enhance pellet quality.

While Nordson's portfolio of WRP systems has a long history, the new BKG® WRP 1000 pelletizer represents an advance over previous WRPs and includes improvements adapted from the company's widely used BKG underwater pelletizers (UWPs). As with other WRPs, the new system provides substantial advantages over strand pelletizers in that it is more compact, generates less dust, is not affected by strand breaks, is more capable of automation, and yields pellets of more uniform shapes and sizes.

In the WRP process, pellets are dry as they are cut from the polymer melt at the die plate, then are flung into a ring of circulating water, where they undergo initial cooling. Further cooling takes place in a chute that transports the pellets to the dryer. Prior to drying, a major part of the water and any agglomerates are removed.

Key benefits provided by the new BKG WRP 1000 system include:

- Rapid die plate change. The die plate has a split design, with separate heating flange and easily exchangeable insert. The design makes possible rapid color changes and easy cleaning.
- Efficient die plate heating. The die plate is heated electrically with heating cartridges and is designed for uniform polymer flow in the die plate holes.
- Efficient and low-noise pellet drying. The centrifugal drying system is adapted from the well-known pellet dryer



BKG® WRP 1000 Water Ring Pelletizer

used for BKG UWPs and guarantees low moisture levels of the pellets. Noise does not exceed 85 dB, and the dryer is easy to maintain and to clean with good access through the two large doors.

- Automated process control option. Besides a pre-wired version without control system for system-integrators, a stand-alone PLC-based system is available for an easy, independent operation and an easy upgrade of existing lines.

► Nordson Polymer Processing Systems
www.nordsonpolymerprocessing.com

Joint Venture

■ Clariant and India Glycols Limited (IGL), a leading company in the manufacturing of green technology-based chemicals, announced a strategic partnership to establish a 51 to 49% joint venture in renewable ethylene oxide (EO) derivatives.

By combining production and distribution capacity, the joint venture is expected to become a leading supplier of renewable materials to the rapidly growing consumer care market in India and neighboring countries, while providing Clariant the ability to leverage the EO derivatives globally across the home care, personal care and industrial applications segments of its Industrial and Consumer Specialties business.

Under the terms of the proposed agreement, India Glycols will contribute its renewable Bio-EO Derivative business to the joint venture, which includes a multipurpose production

facility including an alkoxylation plant located in Kashipur, Uttarakhnad (India).

In return, Clariant will contribute its local Industrial and Consumer Specialties business in India, Sri Lanka, Bangladesh and Nepal, held by Clariant India Ltd., as well as a net cash payment to attain a 51% stake and thus majority ownership. Clariant International Ltd. will be the sole Clariant shareholder in the JV.

The joint venture will market Clariant's entire range of Industrial and Consumer Specialties products in the previously mentioned countries, while all other global markets shall be served by Clariant. To support production, India Glycols has agreed to a long-term supply agreement for ethylene oxide made from bio-ethanol as well as further utilities. At its inception, the joint venture will have approximately 200 employees.

► Clariant
www.clariant.com

Vice President – Aftermarket Sales – Promoted

■ Davis-Standard announced that Andrew Alaya has been promoted to Vice President – Aftermarket Sales. Alaya brings a wealth of knowledge to his new role having held various customer-centric positions at Circonix Technologies, a division of Davis-Standard. His more than 20 years of experience in providing upgrade solutions for PLC, drive and mechanical systems has enabled customers worldwide to optimize their equipment investments. This includes expertise in machine fabrication, alignment services, engineering design, rebuilds and retrofits, maintenance training, installation, commissioning and startup.

“Andrew will provide strategic leadership as we continue to develop and promote Davis-Standard’s multi-faceted port-

folio of aftermarket products and services,” said Zachary Ament, Davis-Standard’s Executive Vice President of Aftermarket Sales.

■ Davis-Standard, LLC
www.davis-standard.com



Andrew Alaya

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New 800 Series Hybrid Extrusion Tooling Announced

■ Guill announces the introduction of a new version of its popular 800 series, known as 800 Series Hybrid. In some extrusion applications that utilize crossheads and inlines, layers of the exact same material are applied multiple times, using a single die. This method is used to reduce the propensity for errors caused by gels breaking through a thin wall, weld lines, inconsistent wall thickness, plus material and process variations. Additional errors include difficult-to-process materials and demanding applications where there is zero fault tolerance.

Seeking to design the next generation multi-layer die to overcome these challenges, the engineers at Guill looked for a way to incorporate this technology into an updated version of the 800 Series. This led to the creation of the 800 Series Hybrid. The inherent benefits of the 800 Series are retained, including compact design, low residence time and a common deflector bore that eliminates tolerance stack up. The challenge was to create a hybrid design that incorporates the benefits of layer overlapping, while reducing unnecessary complexity and making the technology more cost-affordable for customers. This was achieved by overlapping layers in each semi-deflector, using a single cone. The highly efficient design of the 800 Series Hybrid reduces cost and size, as opposed to other methods of overlapping layers.

Essential benefits of the 800 Series Hybrid include eliminating weld lines in materials through patented overlapping technology, producing a more consistent finished product; reduced sensitivity to changes in viscosity; reduced sensitivity

to changes in line speed; myriad material and multi-layer application possibilities; works in all tubing and jacketing applications with a wide range of materials; low residence time; compact design and a low tolerance stack-up error factor, all resulting in improved concentricity.

The 800 Series Hybrid extrusion tool greatly reduces stagnation, because overlapping layers are more inherently balanced than single layers and also because each semi-deflector is “tuned to flush.” Conventional deflectors must simultaneously achieve a balance between flushing, balancing and eliminating the weld line. There is less difference between the slowest moving material and the fastest moving material in the deflector channels, thus making the viscosity more consistent in the deflector.



► Guill Tool & Engineering
www.guill.com

Independent Authority Certifies blueloop Laminate Tubes

■ The Huhtamäki team, together with partners Plastuni Lisses, member of the Somater Group, and Zalesi, have developed polyethylene (PE) based tubes that have been certified as fully recyclable within the high-density polyethylene (HDPE) container stream by RecyClass, the cross-industry initiative that works to advance plastic packaging recyclability and to establish a harmonized approach towards recycled content calculation and traceability in Europe.

“The new recyclable blueloop laminates are a perfect example of effectively implementing sustainable design principles and contributing to the development of the circular economy,” says Jens Pilzecker, Head of Global Tube Laminates at Huhtamäki’s Flexible Packaging segment. “With these laminate structures we help our customers take a big step forward in addressing their sustainability targets as they can now package products in fully recyclable high-barrier tubes.

In addition, this innovation is in line with our target of designing 100% of our products to be recyclable, compostable or reusable by 2030.”

Availability of high-quality recycled material is still a major bottleneck in the transition to a circular economy and Huhtamäki Flexible Packaging is proud to offer these new fully recyclable laminate structures as part of the solution. According to the recycling analysis carried out by the Institut für Kunststofftechnologie und -recycling (IKTR), as per the RecyClass Recyclability Evaluation Protocol for HDPE containers, the recycled plastic generated in the mechanical recycling process can be used in high-value applications such as HDPE bottles.

► Huhtamäki OYJ
www.huhtamaki.com

Fresh Milk in Clear PCR/PET Bottles is a First in Argentina

■ Amcor has broken new ground in the Argentine dairy market developing the first fresh milk bottle made of transparent post-consumer recycled (PCR) polyethylene terephthalate (PET) resin. The custom-designed 1-L container for leading dairy maker Mastellone Hnos, Buenos Aires, supports the positioning of the La Serenisima Original milk brand as a natural product while also delivering optimum shelf life and increased sustainability benefits.

Latin American dairy companies are increasingly using clear PET bottles to showcase freshness and premium quality. The cold-fill bottle contains 20% PCR content and is designed to drive consumers from aseptic packages to the chilled section of the grocery store. The breakthrough bottle follows the October 2019 launch of Mastellone’s shelf-stable, ultra-high temperature (UHT) white milk in aseptic, white-colored PET bottles also from Amcor.

“In a market that has remained stagnant for several years, we’ve broken the rules by developing an entirely new format offering for fresh milk,” said Martin Darmandrail, Amcor’s Specialty Containers Director (Argentina). “We’ve shaken things up with a unique fresh milk package with the durability, freshness, performance, and sustainability benefits of PET.”

The container includes a 38mm finish and a HDPE screw cap from Bericap North America (a joint venture between Amcor and the Bericap Group). A key technical challenge was limiting light exposure and preventing damage to the product. To preserve the contents, a special barrier was developed to help extend shelf life.

“Mastellone wanted to align its grass-fed sourced, ultra-pasteurized fresh milk product with Amcor’s clear plastic bottle. Amcor responded to the challenge with a distinctive transparent solution combined with an effective barrier to preserve our premium product,” said Gaston Dominguez, Manager, R&D Packaging for Mastellone. “Along with meeting key functional requirements, we were also able to reduce our impact on the environment.”




PET, which has rapidly become the world’s preferred packaging material, is lightweight, shatterproof, reclosable, re-sealable, reusable and infinitely recyclable (With existing technologies including chemical recycling). In addition, PET bottles often have the lowest carbon footprint and their production results in up to 70% less greenhouse gas emissions than other packaging materials, according to Amcor’s Asset Lifecycle Analysis. In the midst of today’s hygiene concerns, capped and sealed PET bottles keep beverages protected from pathogens like viruses and bacteria. They are also sealed to combat contamination and re-sealable for ongoing protection.

In Argentina, the new fresh milk product will be available in select metropolitan areas with broader distribution later.


■ Mastellone Hnos S.A.
www.mastellone.com.ar

Amcor
www.amcor.com




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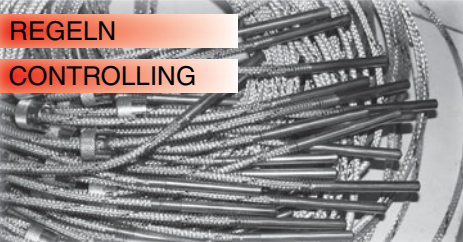
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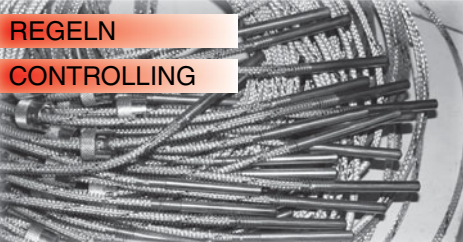
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DURACON® POM PM Series with New High-Flow Grade for Medical and Healthcare Industry Expanded

■ The Polyplastics Group is expanding its DURACON® polyoxymethylene (POM) PM series portfolio with the development of a new high-flow grade for drug contact and delivery applications for the medical and healthcare market. The new grade, DURACON PM27S01N, offers reduced wall thickness, miniaturization, and lower weight for various medical devices that are becoming increasingly complicated and highly functional.

Polyplastics' PM series, which also includes DURACON PM09-S01N, a standard viscosity grade, complements the company's TOPAS® cyclic olefin copolymer (COC) product, a high-purity material for a range of medical applications.

DURACON PM27S01N delivers global medical and food regulatory compliance. In a changing and growing marketplace, medical device manufacturers and end users demand high-quality materials and reliable suppliers, according to Polyplastics, which is a leading global manufacturer of POM materials for diverse markets.

DURACON PM27S01N meets regulatory compliance requirements including ISO10993 and USP Class VI biocompatibility/cytotoxicity, FDA Drug Master File (DMF) and Device Master File (MAF), and EU 10/2011 and FDA food-contact 21 CFR 177.2470.

The material adheres to strict quality management systems including conformity to VDI guideline, VDI 2017 medical-grade plastics. It also provides

full traceability of processes and products, and production management based on GMP principle. Polyplastics also provides uniform quality and global supply.

Polyplastics offers medical device manufacturers extensive data on the long-term reliability of its materials.

TOPAS COC is a glass-clear and highly pure plastic which offers stiffness and barrier resistance, biocompatibility, and drug compatibility for wearables, drug delivery, medical devices, pharmaceutical blisters and trays, and diagnostics and microfluidics.



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► Polyplastics Co., Ltd.
www.polyplastics.com/en/

Pellet Line Expansion

■ Palsgaard is driving the trend towards more natural ingredients and additives as industries strive for enhanced sustainability by increasing the use of renewables in their materials sourcing. The Danish pioneer in food emulsifiers has opened

Palsgaard's new pellet line will have an annual capacity of 10,000 MT (Photo: Palsgaard A/S)



a new 10,000 tonnes pellet line that also expands the manufacturer's production capacity for Einar® brand plant-based polymer additives.

The expansion of the pellet line also addresses the needs of compounders and processors who may wish to add specific Einar® products to polymers directly rather than as part of a more complex masterbatch formulation. This applies in particular to the use of Einar® anti-static additives for food and other packaging applications, where the availability of pelletised products enables a clean and straightforward process.

Palsgaard offers its Einar® plant-based anti-fog and anti-static additives in several grades tailored to film, injection moulding, foam and coating processes for a wide range of different polymers, from polyolefins and PVC to PET and engineering plastics. Moreover, the Einar® portfolio also includes slip additives, ageing modifiers, mould release agents and dispersing aids. All products have full FDA and EU food-contact approvals.

► Palsgaard A/S
www.palsgaard.com/polymers

2021 AdEx Home

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Our Moderator

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Less Plastic for More Sustainable Packaging

■ Plastic disposable packaging is under enormous pressure from different directions. On one hand, the European Union charges a fee of up to 800.- € per ton for non-recycled one-way packaging. On the other hand, the public pressure on this form of packaging is growing due to the amount of plastic waste in the world's oceans, not to forget the fees for collection and recycling institutions.

Nevertheless, plastic is an irreplaceable material in the packaging industry for the protection of goods and food and therefore an important part of the value chain. But how to design and produce easy-to-open, stable, flexible and above all recyclable packaging while protecting the environment and conserving resources?

Eco-rPET tray produced with Promix technology: lighter weight and less plastic consumption (Picture: Promix Solutions AG)



A solution: Reducing the packaging weight by up to 30 % and still getting a stable and protective packaging. This is possible by using the Promix microcellular technology, in which a foam structure is created in the polymer by environmentally friendly gases such as CO₂ and N₂. With the microcellular technology of Promix Solutions AG this is possible in a reliable process and the investment pays off within a few months. On a conventional extrusion packaging line with a throughput of 500 kilogram of plastic per hour, up to 3.6 tons of plastic can be saved per day and thus 3,600 € per day or almost 80,000 € per month. This results in a reduced plastic consumption of 1.000.000 kg per year, per production line. As the gases are ecologically neutral and no environmentally harmful additives have to be used, this technology is a green solution for retail packaging, boxes, trays and much more. Recycling of the finished packaging and sections from production, such as those produced during thermoforming, is possible without any problems, as the gases do not accumulate in the plastic, as other additives do.

Rolf Heuser CEO of Promix Solutions AG: "The Promix technology can be used for almost all plastics. With polyolefins, polystyrene and polyesters the greatest experience is available, but biopolymers have also been modified with very good results". In case of biodegradable plastics, the weight reduction has another side effect. More surface and less weight lead to naturally shorter degradation times, as well in industrial composting plants.

► Promix Solutions AG
www.promix-solutions.com

A Turning Point in the Packaging World

■ Thanks to its historical experience in the production of packaging machines and films for the food market, Fabbri Group is proud to introduce for the first time in the packaging world the innovative concept of "HYBRID".

Automac Dual, Automac Industrial and Automac Ultra are the three high-productivity wrapping machines of the new "Fabbri HYBRID" range, which guarantee a perfect packaging of fresh and very fresh products with any type of stretch film, in both neutral and printed format: PVC-based film, PE-based film, bio-based film and compostable film.

All the films Fabri produces are characterised by reduced thickness and high performance, guaranteeing a very low use of raw materials and the lightest possible packaging. Great attention is also paid to the effective disposal of packaging at the end of its life: the recent "Nature Fresh" certified compostable film, for example, can be thrown directly into the domestic compost bin without generating packaging waste.



FABBRHYBRID



The new machines have been designed to ensure quality packaging even with alternative films.

► Fabri Group
www.gruppofabbri.com

New Head of Technical Center

■ Varinia Ruano took over the position of Head of the Technical Center at W. MÜLLER GmbH, a specialist in extrusion blow molding, at the beginning of the year. The engineer wants above all to develop and establish sustainable technologies and digital processes. Ruano joined the company in 2018 and initially worked as an employee at the technical center.

She sees the most important topics for the coming months as the digitalization of the development processes the increased use of recyclates and ways to save material without compromising on the properties and quality of the manufactured products.

Managing Director Brigitte Müller commented: "W. MÜLLER has traditionally defined itself through its innovative strength in the areas of extrusion and blow molding. With Ms. Ruano, a person now leads our development team, who will align our work even more closely with the current issues of our time. In doing so, we will provide answers to the pressing questions surrounding the circular economy, in particular looking for solutions to minimize the ecological footprint of blow-shaped packaging and its manufacturing process."



Varinia Ruano (Photo: W. MÜLLER GmbH)

W. MÜLLER GmbH
www.w-mueller-gmbh.de

LESUN

New factory New beginning

lesunscrew.com

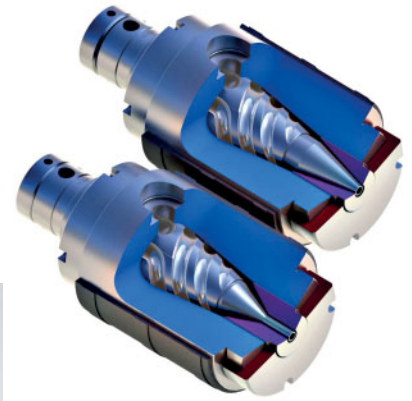
New Extrusion Head Features NO Hardware, for Easy Cleaning, plus Quick-Change Tooling

■ Guill Tool introduced The Bullet® in 2015, a new extrusion head with fixed center design, multi-port spiral flow design and gum space adjustment, plus the added feature of no fastening hardware, so cleaning and restart are easier and faster than any conventional head on the market currently, according to company sources. Now the company announces the next generation of this unique and patented tool, The Bullet II.

The Bullet II allows quick tooling changes, as the tips remove from the back and the die removes from the front of the unit. The absence of fastening hardware eliminates leaking, as does the taper body and deflector design pioneered by Guill. Additionally, the new patent pending CAM LOCK® deflector retaining system offers these additional benefits to extruders and machine builders:

- It only takes ½ turn of the Cam Lock® to remove and install the Deflector and Tip
- No fastening hardware required
- Fast tool changes, threaded retaining ring for the die and threaded tip retainer
- Dies are removed from the front and tips from the rear
- Tooling retainers also provide gum space adjustment
- Hassle free air / vacuum connections
- Simplified cleaning
- Reduces downtime and lowers operating costs

High- and low-volume applications are suitable for this head and are accommodated with the simple, easy changing of just one component. A family of crosshead designs is available and users can specify the “caliber”, that is, the max. die ID.



Photos of The Bullet II, showing the absence of hardware, i.e. nuts and bolts, so disassembly, cleaning and restart are made easier

A vacuum chamber and kit for assembly and disassembly are included with the unit. Optional keyed tooling capability offers machine designers and end users quick orientation, so the overall unit design enables faster disassembly, proper cleaning and restart, allowing the line to become more profitable, more quickly.

For a video demonstrating this new design, please visit: <https://www.youtube.com/watch?v=MpEdmCRtaqg>

► **GUILL TOOL & ENGINEERING CO., INC.**
www.guill.com

Compounds for Pearled BoPP Films

■ The pearled and white-pearled masterbatches of Tosaf's ZD family enable manufacturers of BoPP films to flexibly address specific requirements of their customers in the packaging and label industries. When added during processing they ensure uniform film properties as opacity, gloss, and thickness, across the entire width, even when producing films with reduced density or high yield. At the same time, they contribute to stable production lines and thus high productivity.

Typical applications of Tosaf's pearled Masterbatches include packaging films for chocolate bars or lentils (© JLMcAnally/Shutterstock.com)



ZD masterbatches from Tosaf are suitable for the production of pearled and white-pearled films in a wide density range from 0.55 to 0.80 g/cm³, with ZD1738HP being optimized for up to 0.65 g/cm³ and ZD2446HP for medium to higher densities. Typical applications include packaging for soap, confectionery, ice cream, baked goods, candy, and snacks. In the label sector for Wrap Around (WAL), In-Mold (IML), Cut & Stack and Pressure Sensitive Labels (PSL).

In parallel with standard grades, Tosaf commercializes white-pearled compounds based on different ratios of calcium carbonate and titanium dioxide to match density, opacity, and whiteness to specific customer requirements. Films produced with ZD products can be metallized.

► **Tosaf Compounds Ltd.**
www.tosaf.com

New Design for Large Melt

■ Nordson Corporation has expanded its high-capacity melt pump portfolio, enhancing process efficiency and end-product quality while reducing the total cost of ownership in comparison with its previous large pumps.

The new BKG® BlueFlow™ melt pumps are available in five sizes, with capacities ranging from 1,164 to 4,900 cc per revolution. They represent a harmonization and optimization of previous pump designs developed separately by the melt pump business of Kreyenborg GmbH and by Xaloy Corporation, which were acquired by Nordson in 2013 and 2012, respectively. Prior to harmonizing these new large-capacity melt pumps, Nordson had carried out a similar alignment of smaller melt pumps with capacities from 33 to 716 cc per revolution. These pump sizes have been successfully installed in a vast number of extrusion, compounding, and polymerization applications world-wide.

The new harmonized design reduces the total cost of ownership in these ways:

- **Improved end-product quality.** By maintaining constant pressure and adapting to process variations, the new-design pumps increase product consistency, making it possible to run thinner layers, for example, while staying within target tolerances.
- **Greater output.** Nordson has improved productivity by rheologically optimizing the core components and the polymer flow through the pump.
- **Reduced downtime.** Other features of the new pumps are designed to speed up installation, simplify maintenance, and streamline the selection of spare parts.

Board Strengthened

■ The RKW Group is continuing on its successful course. Building on a good business result in the past year, the film manufacturer is setting the stage for further growth. To this end, Knud Müller joined the Executive Board as the new Chief Financial Officer (CFO) on April 1, 2021, under the chairmanship of Harald Biederbick.

The finance expert comes from the U.S. Danaher Group, where he has held a number of management positions in



Knud Müller is the new CFO of the RKW Group



BKG® BlueFlow™ Melt Pump

• **Energy savings.** An increase of 10% in the heat-exchange area has saved energy by reducing heating requirements for these fluid-heated pumps. All of the new sizes are equipped with a new multilayer heating arrangement as standard. This enhances the processing of temperature- and shear-sensitive polymers and facilitates applications that must comply with the EU's ATEX safety directives.

The BKG BlueFlow range includes melt pumps for film, sheet, pipe, profile, fiber, compounding, recycling, polymerization, and hot melt applications.

► Nordson Corporation
www.nordson.com

Nordson Polymer Processing Systems
www.nordsonpolymerprocessing.com

both Germany and the United States since 2007. Prior to that, the business graduate worked for the Siemens Group worldwide for more than ten years.

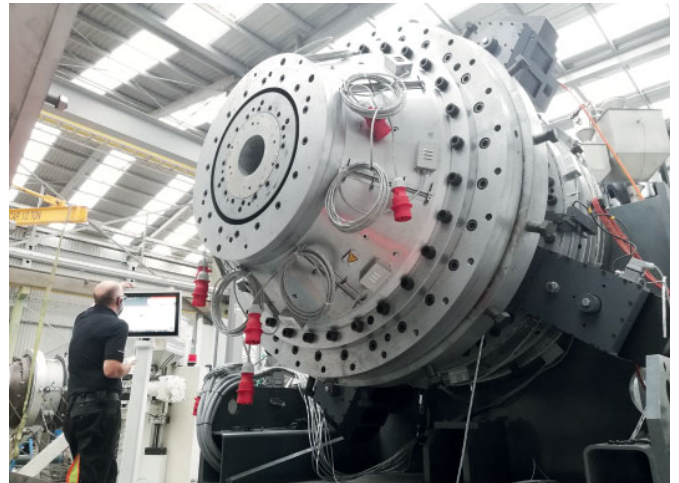
"The positive business development in the past year is an incentive for us to continue on our chosen course," says Dr. Rudolf Wehrli, Chairman of the Supervisory Board. With the expansion of the Executive Board, the company is now creating the conditions for further growth, adds CEO Harald Biederbick. "Our goal is to also be able to successfully implement larger M&A projects or post-merger integrations. We are setting ourselves up for this in good time with an expanded Executive Board."

Profitable, sustainable growth and continuous improvement are also the focus for Knud Müller: "In a difficult environment marked by the Corona pandemic, RKW took a significant step forward last year. As one of the world's leading film manufacturers, we are now turning our attention to new, promising markets – for example in Asia or North America. I am particularly looking forward to this challenge."

► RKW-Group
www.rkw-group.com

Successful Large-Diameter Pipe Installation in Mexico

The HDPE pipe specialist Policonductos SA de CV, based in San Luis Potosí, Mexico, is now starting to produce large-diameter pipes with diameters up to 1,600 mm. For this purpose, the plastics processor purchased a complete line from battenfeld-cincinnati Germany GmbH, Bad Oeynhausen, which was recently installed and successfully commissioned. The special feature of this large-diameter pipe extrusion line is its pipe die, which comes with the largest melt gap ever produced, and thus enables the production of pipes in a wide range of different diameters without conversion



At the world premiere of this largest adjustable melt gap for large-diameter pipe dies, at the K 2019, it was already clear that this die would subsequently be shipped to the new customer Policonductos. battenfeld-cincinnati had impressed this pipe manufacturer with its overall line concept and the high dimensional flexibility provided by the adjustable melt gap. "We are absolutely enthusiastic about the range of options offered by this new line. So we have not only been able to expand our product range to include large-diameter pipes, but we can now also produce pipe dimensions to individual customers' specifications without any problems", is how Homero Garza, General Manager at Policonductos, praises the machine manufacturer after the first weeks of production with the new line.

With this large-diameter pipe extrusion line, which in addition to the new pipe die is equipped with an extruder of the latest generation, a soLEX 120 NG, as well as all upstream and downstream components, such as gravimetric metering, EAC internal pipe cooling, vacuum tanks, spray cooling baths, haul-off and cutting saw, Policonductos

reaches an output of up to 2 t/h. It makes HDPE pipes with a color stripe for fresh water supply, sewage disposal and mining applications with dimensions ranging from 406 x 12.5 mm to 1.651 x 97.1 mm.

The recently delivered line belongs to the series of fast dimension change (FDC) systems, which battenfeld-cincinnati has been marketing successfully for a number of years. Up to now, FDC lines were available for pipes with diameters ranging from 160 to 250 mm, 200 to 355 mm and 400 to 630 mm. With the new pipe die, the first step has now been taken towards a completely new dimension for pipes up to 1,600 mm in diameter. There are no comparable systems on the market. An adjustable melt gap makes particularly good sense wherever the pipe manufacturer desires to produce varying pipe dimensions on its line and to respond fast and flexibly to market trends. More or less at the push of a button the pipe die switches over to a new pipe dimension. A major advantage here is safe handling. Especially for large pipes like those produced by Policonductos, a die change would be necessary on a conventional line, which would not only cost an enormous amount of time, but would also be a safety hazard due to the large size. Both these drawbacks are now completely eliminated.



► battenfeld-cincinnati
www.battenfeld-cincinnati.com

Policonductos SA de CV
www.policonductos.com

*LSP (Liquid State Polycondensation) realized on P:REACT
(Images: NGR)*

Beverage brand owners worldwide rely on the LSP technology of Next Generation Recyclingmaschinen GmbH (NGR) for the processing of post-consumer PET. In order to meet the growing interest, a further LSP plant has been available for demonstration and testing purposes since March 2021



The Field of PET Bottle-to-Bottle Recycling further improved

NGR has been the technology leader in LSP technology (Liquid State Polycondensation) for years. In the NGR process, all impurities are removed from the PET melt already in the liquid phase to such an extent that the necessary requirements for food packaging, including water bottle grade, are achieved. The process produces EFSA- and FDA-compliant products with excellent results, as demonstrated by extensive testing and certification.

Bottle flakes coming from washing line



Since the proportion of recycled material in food packaging is to be significantly increased, especially in the beverage bottle and tray production sector, the major brand owners worldwide are now relying on NGR technology from Austria. Numerous projects that have been completed and are currently being implemented confirm the effectiveness and efficiency of the process. By mid-2021 at the latest, plants for processing post-consumer PET will be operating on every continent.

Compared to conventional systems, the NGR process offers an energy-efficient and, in terms of melt quality, better physical cleaning process. The intrinsic viscosity (iV value) is constantly measured and adjusted to the customer's target value via automated control of the vacuum unit. This makes it possible to finely tune the material quality to the customer's product specifications, including ultra-tight IV control, which is essential for downstream production.

For the operator, time-consuming batch production is eliminated and no cost-intensive additional process-

es are required. Thus, no addition of nitrogen or similar process aids are required for iV increase.

The efficiency of LSP technology is also demonstrated by direct coupling with production processes such as film manufacture, spun yarn production or the manufacture of preforms for subsequent bottle production. This eliminates a complete re-melting step and the associated iV degradation resulting from a downstream process. The elimination of the pelletizing process again significantly increases energy efficiency.

To better demonstrate the LSP process and carry out customer trials, NGR is expanding the PET pilot plant with an additional line. Customers will thus have two LSP lines available for testing purposes at NGR since March 2021, so that both bottle-to-bottle trials and other applications can be successfully tested.

► Next Generation Recyclingmaschinen GmbH
4101 Feldkirchen/Donau, Austria
www.ngr-world.com

Cut pipes, Cut costs – Go Green

Sica contributes to a sustainable world with its “green machines”. In fact, its investments in research and development are geared to machines that reduce process costs, reduce energy and material consumption and avoid plastic dust and chips recycling, assuring a clean and safe environment. How did Sica do it?



One example is the patented solution to cut and chamfer PVC pipes without removing material. After years of research, Sica is now promoting a saw that warms up a portion of the pipe, cut it with a parting knife and then creates a bevel by shaping the heated portion instead of using a chamfer tool that removes material, which creates dust and/or chips. It's a big innovation that allows a noiseless cut and avoids the expensive need for recycling material, cleaning the environment around the saw, and also

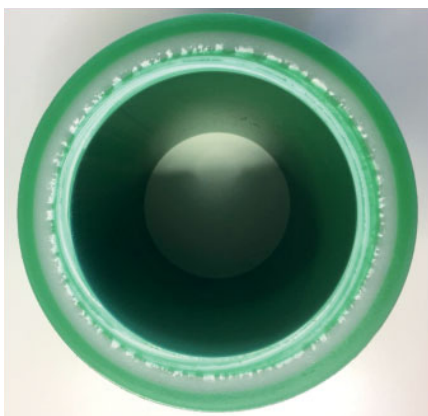
downstream. In fact, with traditional saws, even when there is an excellent vacuuming system for dust and chips, it cannot completely avoid chips depositing on the saw mechanism or on the cut pipe. Therefore, pipes will always carry part of the scrap material with them on their way towards the belling machine or the end of the line.

Another interesting innovation in the field of cutting swarfless pipes is the patent pending electric saw for HDPE, PP-R, multilayer and PVDF

pipes. Each cutting movement is electric, therefore silent, precise and extremely repetitive. In particular, for the movement of the cutting arm, the machine has been equipped with an innovative extremely compact servo-actuator which integrates the motor and gear unit, and which guarantees superior thrust force even at high speeds, impact resistance, complete absence of vibrations and high efficiency – all translate into superior final quality of the cutting process. This is clear from the pictures of the cut of a 3-layer pipe (PPR-FG-PPR); the old cut is made with a classic hydraulic system, while the new one with a specific electric cutting action developed by Sica and now possible with this innovative saw.

Avoiding environment pollution and reducing costs, is what we should all pursue to give our world a hand if it is to be preserved for the well-being of future generations.

Old



New



OCS relaunched the Liquid Analyser LA20 with the state-of-the-art inspection technology. While some special machine manufacturers fear for orders, OCS develops further improvements on the basis of customer projects. Just like in this case, the LA20. With its modern design and the use of innovative camera technology, the smallest impurities in liquids can be detected and analysed with the help of the hardware and software components supplied

OCS Liquid Analyser LA20



Perfection in the Detection of Impurities in Liquids

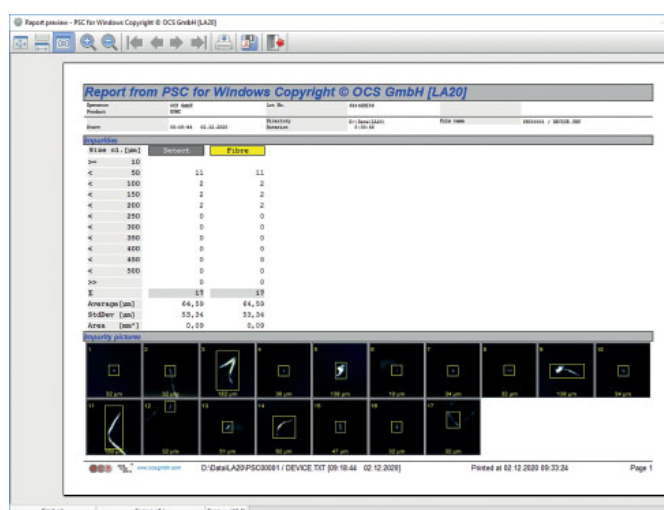
The OCS Liquid Analyser (LA20) is used for optoelectronic inspection of cellulose ethers dissolved in water (e.g. methyl cellulose). This enables the detection of impurities of insoluble components.

The high-resolution colour area camera as well as the high-performance LED lighting are protected by a modern metal housing against dirt and dust. The inspection of the liquids takes place in transmitted light and contaminations from a size of 10 µm can be easily detected. In measuring mode, the light output is automatically adjusted to the translucency of the liquids. Special attention was given to



Transparent/translucent liquids (© Shutterstock)

Report by OCS Analysing Software LA20



the easy cleaning of the flow cell and the optical filters. Furthermore, the flow cell is continuously purged with air in order to prevent measurement value falsifications.

The special design of the LA20 analysis computer enables a variety of customer-specific system configurations and extensions. The real-time analysis software also allows the operator to freely configure the image processing. This includes, for example, the detection of contaminants via colour classes or the classification of detected contaminants into freely definable colour, size and shape classes.

OCS Optical Control Systems GmbH
Wullener Feld 24, 58454 Witten, Germany
www.ocsgmbh.com

Also from manufacturers of extrusion blow molding machines comes an important contribution for the protection of the environment through the use of recycled plastic materials. From waste to new resource

Use of recycled materials for the production of eco-sustainable containers



Circular Economy and Sustainable Packaging

Europe bans the use of single-use plastic products. International organizations have long talked about the risks associated with the excessive use of this material in terms of impact on the environment: for oil consumed, for emissions of greenhouse gases (GHG). However, plastic plays a key role in the protection and preservation of products, from production to consumption, in every field. Resistant, safe, hygienic, aseptic, light, durable and recyclable, plastic maintains its important function in the entire supply chain, if we consider that in Europe alone, more than 50% of goods in circulation use plastic to deliver to consumers intact, fresh, protected products.

A virtuous mechanism

Awareness of these important aspects, which has been affecting the sector for decades, has set in motion a virtuous mecha-

nism that has led professionals to create low-energy-consumption machines and better packaging containers, compared to a long time ago. One fact above all: the weight and volume of the containers has been significantly reduced, even by 30% less. An aspect that saves the consumption of tons and tons of plastic material. Without neglecting the importance of a virtuous recovery and recycling policy set in motion by many countries.

Plastiblow, among the first in the sector to develop electric machines for low energy consumption extrusion blow molding, has long been committed to the reduction of the use of virgin plastic, because it has developed multilayer co-extrusion technologies capable of processing more recycled materials for the production of new containers.

More and more customers are looking for solutions for smarter

and more efficient packaging that save energy and reduce the consumption of raw materials. The fundamental combination for being virtuous is: the less material I use for the production of the containers, the less energy I consume. Reducing weight, cutting waste, using more recycled materials, absorbing less energy, are objectives that Plastiblow has made its own with a competence made available to its customers around the world.

Plastiblow can advise customers on how to reduce weight while maintaining the physical and mechanical properties of the containers. It can modify or study the design of the containers according to the forming process in the mold. It can design the configuration of multiple extruders to reach up to 7 layers of material, as in the case of the food sector. It can finely control the process parameters that can be reached

by its machines to obtain the suitable conditions for a reduction in weight and waste.

Highly reliable electric co-extrusion blow molding machines

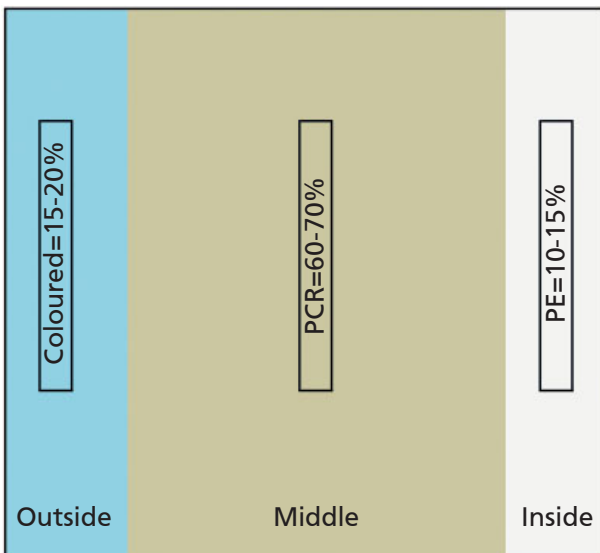
Plastiblow machines offer repeatability of results thanks to the reliability of the servo drive movements and the precision of the controls.

The design and construction of the machines, characterized by the quality of the technical solutions applied, some of which covered by patents, also includes lower maintenance costs for the use of particularly reliable and precise mechatronic systems, as well as control systems for remote diagnosis of processes from an Industry 4.0 perspective.

Multilayer co-extrusion as a plastic saving solution

The scenario involving the rational and responsible use of plastic, recycled materials, the possibility of reusing "post-consumer" resin within the production process, for Plastiblow it is already a reality, because it offers solutions for the production of single-layer or multi-layer containers with the use of

Recycled plastic material enclosed between two layers of virgin material. No interaction with the content; unchanged external aesthetic appearance



PB12E5-480 Coex3 Plastiblow equipped with one E60/25 and two E50/25 extruders, Triple parison head, 70 mm die diameter and center distance 120 mm for the production of 3-layer containers

post-consumer recycled plastic (PCR).

Thanks to Plastiblow technology it is possible to obtain a final product where the recycled material does not interact with the content because it is enclosed between two layers of virgin material and where the external appearance remains aesthetically unchanged. The thickness of the central layer, approx. 60 to 70% regardless of the total thickness of the container, is made of recycled plastic. Inner and outer layers are made of virgin materials, normally high density polyethylene, with a thickness of 10 to 20%, therefore extremely low. The thickness of the layers of virgin material is fundamental for the optimization of two opposite needs: on the one hand, the desire to reduce the amount of virgin material used, on the other hand, the necessity to guarantee a good and homogeneous coverage to give the final product

a traditional aesthetic appearance. Furthermore, an adequate thickness of the internal layer allows to maintain high welding characteristics and prevents the elements present in the layer of recycled material from contaminating the product. A series of tests carried out in collaboration with GCR Group, a leader in Europe and the global reference for the development of eco-sustainable compounds for the plastics sector, performed on Plastiblow electric machines, confirmed that the versatility in the use of recycled materials is optimal. Even with the use of alternative raw materials, Plastiblow machines maintain cycle times, speed and final result of the final products unchanged. Increase in productivity, reduction in energy consumption, increase in the percentage of recycled material: Plastiblow's contribution to the circular economy in sustainable packaging production has been largely achieved.

► PLASTIBLOW SRL
Via Salvemini, 20, 20094 Corsico (MI), Italy
plastiblow@plastiblow.it, www.plastiblow.it

In the last 20 years, numerous actions have been undertaken to modernize traditional networks, this article aims to analyze some of the most important reasons why, in many of these actions, replacements and renovations of important sections of pipes made of different materials are being undertaken and why, in many of these cases, Oriented PVC (PVC-O), TOM® Pipes from Molecor are being used



Replacement and Repair of Pipes of Different Materials by PVC-O

Most frequent reasons for replacement

The rheological action of time and use: All materials wear out with use and time, some to a greater extent than others. The regression curve of the materials used has to be taken into account at the time of its choice, this regression curve determines the loss of mechanical and hydrostatic properties of the material over time.

Material fatigue: Continuous pressurization and emptying, overpressures and depressions as a consequence of transitory phenomena, water of poor chemical quality, chemically aggressive soils or fillings against materials that are especially sensitive to corrosion... make the material to be affected and different replacements have to be undertaken.

Design errors: These errors also affect the durability of the materials, even in some cases that are difficult to foresee, such as:

- Incorrect sizing of the pressure of the used material.
- Design of supporting materials and coverings of the pipes in the trenches.
- Location of the vents installation points.
- Choice of type of vent.
- Failure to prevent the occurrence of transitory phenomena.
- Insufficient or ineffective solutions to attenuate or reduce the amplitude of pressure between the overpressures and depressions occurring in the network, even caused by the elements installed in the network.

Insufficient maintenance of networks: Maintenance, especially of the security elements of these networks is very

important, and it is much more so in those networks of seasonal use, and its conditions, and greatly, the durability of the complete system, particularly of the pipes.

Improper exploitation: The consequences derived from this problem are usually linked to the problem defined above, of maintenance deficit. Due to different circumstances, which it would be convenient to analyze for each case, at a certain moment, these actions may work under conditions not foreseen in their design.

Manufacturing failures of the installed material: Manufacturing errors have been detected in different materials, probably covered by not very demanding Product Standards or deficient quality controls by the manufacturers themselves that have triggered real ordeals for network users, resulting in continuous breakdowns.

Bad or poor execution: Inadequate leveling of the installed pipes can lead to significant problems, most of them related to the creation of occluded air pockets inside the networks, poor installation or assembly including welding of pipes, poor anchor blocks in direction changes and derivations, etc.

Why the use of PVC-O for these replacements?

The choice of the type of material in the pipes and fittings of the distribution network must be based, among other parameters, on those that have to do with the durability of the installation, such as:

hydraulic capacity, the behavior of the material against continuous transients that occur in a network, ease of in-

stallation, the deterioration of the material over time, its roughness and, as a consequence of this, its associated loss of load, or its own energy optimization.

At the same time, climate change has led many Administrations to define their policy looking for greener and more environmentally friendly solutions. Faced with this reality, TOM® PVC-O Pipes are possibly the solution that best fits this complicated equation, being the most ecological and respectful solution with the environment to use for the transport of water. Theirs larger hydraulic section for the same nominal diameter, together with its low roughness, compared to other plastic pipes, allows, for the transport of the same flow, to reduce energy consumption in water transport by reducing its speed, in other words, at the same speed, their hydraulic capacity is 25% greater than polyethylene and 14% greater than conventional PVC.

The complete watertightness of the joints and the durability of the pipes and fittings, guarantee the safety of the system, thus avoiding leaks of the piped water.

Better behavior against water hammer: The celerity of the TOM® pipe is lower than in the rest of the pipes, which allows it to mitigate overpressures and depressions caused by the dreaded water hammer derived from sudden stops in the uncontrolled supply, impulse start-ups, and of the effect produced by the action of auxiliary elements that act on the network.

Thanks to their lightness, manageability and ease of connection, conferred by their excellent physical and mechanical characteristics, they can be manually installed up to DN250 mm. Besides this, due to their laminar structure, they are very resistant to impact and to the propagation of cracks, this means that breaks are significantly minimized during handling and installation on site.

Their chemical inalterability makes them immune to corrosion and highly resistant to fertilizers and phytosanitary products. This fact, together with the exceptional tightness of their joints, prevents leaks or contamination of the piped water.



Better contribution to sustainable development, presenting a significantly lower environmental footprint than other products. This is due both to the energy efficiency achieved during its manufacture and use, as well as the lower CO2 emission into the atmosphere throughout its life cycle. In this way, they have a lower contribution to the greenhouse effect and climate change on the planet. The technological improvement presented by the innovative and exclusive Molecular Orientation process of Molecor provides the "TOM® Pipe" with mechanical and hydraulic characteristics far superior to the pipes made of traditional materials. In pressurized water pipes, a pipe of great mechanical and chemical resistance is achieved, therefore, with a very high useful life; which has led Molecor to guarantee the product for 50 years for all its pipes manufactured in the Loeches production center (Madrid) in accordance with the Spanish standard UNE-EN 17176: 2019 "Pipeline systems in plastic materials for water supply, irrigation, sanitation and sewerage, buried or aerial, with pressure (based on the European standard EN 17176) and the international standard ISO 16422: 2014 "Pipes and joints made of oriented unplasticized poly (vinyl chloride) (PVC-O) for the conveyance of water under pressure ". TOM® Pipes have the corresponding AENOR N Mark product certifications No. 001/007104 in accordance with UNE-EN 17176: 2019, and No. 001/006537 in accordance with ISO 16422: 2014.



Saving Energy with Networked Continuously Variable Transmissions (CVT)

Electric drive technology is one of the most widespread industrial technologies. Globally, electric drives convert more than 6000 TWh of electrical energy into mechanical output, an amount equivalent to approximately 27% of global power production [Source: Siemens]. This is true in Germany as well, where industrial users account for 46% of total power consumption or approximately 250 TWh (900 petajoules). Seventy percent of this falls on electric motors and electromotive systems (175 TWh or 630 petajoules) [Source: ABB]

In 2015, European standard EN 50598 went into effect. It defines Ecodesign requirements for electric drive systems in low-voltage electrically driven machines. Accordingly, all products that utilize an appreciable amount of electrical energy must be evaluated for their efficiency or losses, respectively. But will this relatively young European standard be the final word? What role will conventional drive technology play in the future in the context of trends like IoT and Big Data, Industry 4.0, Industrie du Futur, Piano Nazionale Impresa 4.0, Industrial Value Chain Initiative, Industrial Internet Consortium, and Made in China 2025?



*Electronic CVT drive system vs. single drive system
(Source: Unternehmenschaft Düsseldorf und Umgebung e.V.)*

Many current innovations depend on sophisticated sensors, generation and storage of data, edge and cloud technologies, and data transmission (including 5G). Statistical and mathematical algorithms, automation, and the emerging trend of artificial intelligence (AI) play supporting roles. In other words, a large portion of the functionality and associated customer benefits are realized through software and communication. This article from Kabel.Consult.Ing discusses how intelligent digital and energetic networking of a modular split-power CVT drive system on the “mechanical train side” can provide new functionality and increased value for machine manufacturers and operators.

Introduction to CVT technology

The use of mathematical and scientifically-based methods in the process

of designing complex machines was first championed by Robert Willis (1800–1875) of Cambridge University and is one of the most important accomplishments of the late industrial era. During his time, he was a new breed of “engineer scientist” because he broke from the workshop tradition that had dominated mechanical engineering and embraced mathematics, engineering education, codification of mechanical practices, and scientific principals. With this new approach to mechanical design, Robert Willis greatly influenced generations of engineers. One of those engineers was Geoffrey Joseph Abbott, who in 1935 applied for a patent on a “mechanical continuously variable transmission”. So far, more than ten million CVTs have been sold around the world for use in industrial and especially automotive applications.

In 2004, the first German KfW energy efficiency prize was awarded to a twisted cabling machine that made use of a CVT process for production of wire cable (winding and stranding process). The jury included two luminaries of international energy research: Dr. Ernst Ulrich von Weizsäcker and Dr. Eberhard Jochem. By directing braking energy back into an on-site power network, the system reduced net power consumption by approximately 20%. During subsequent years, energy regeneration units (or the intermediate voltage circuit) have become standard equipment. With newer machines, where the unwinder (generator operated) and rewinder (motor operated) are energetically-linked via an intermediate voltage circuit, energy savings are known to be in the area of 40%. In 2014, Kabel.Consult.Ing filed for patent protection of its Electronic Continuously Variable Transmission. It brings together the achievements of the first three industrial revolutions and sets the stage for the era of Industry 4.0. In formula form: Industry 1.0 + 2.0 -> fundamentals, pioneer achievements; Industry 3.0 -> semiconductor technology, PLC programming, CIM; and Industry 4.0 -> automation of intelligent behavior, programming of algorithms using statistics and mathematics.

Research conducted at University of Technology Sydney and Hunan University Changsha (2018) likewise concluded that mechanical CVT drive technology is the most efficient and economical way to power large and small electric vehicles.

Summary. Use of networked CVT technology can boost average efficiency of motors from well below 60% currently to 80% or even 100%, resulting in greatly increased total efficiency of motor- and generator-powered applications. This results in minimized energy costs, maximized energy outputs, and ultimately to standardization throughout a production plant. From a macro-economic perspective, (networked) CVT technology makes a valuable con-

tribution to "decarbonization" and lower CO2 emissions.

CVT processes have become common in high-speed applications in the cable, wire, and stranding industry

To remain competitive, manufacturers have for decades sought to accelerate production by continually increasing the speeds of their cable and stranding machines. Higher speeds result in tremendous centrifugal and Coriolis forces that impart tension into the rotating elements. For these reasons, engineers have until now focused on optimizing the drives. Little by little, purely mechanical drives have been replaced by electric and then mechatronic solutions. In the cable industry, twist stranding and central winding spinners are important components in this effort.

Stranding machines, where twisting is accomplished with individual or group components or the cable itself, have been in vogue since at least the era of data cables (and no later than the hybrid cable era) due to their universality and variable ability to reverse direction. With twist stranding, the stranded elements are threaded through a stationary guide disc and fed to a (rotating) stranding nipple. As soon as the bound strands leave the nipple, a stranding rotor twists them together into a helix shape and guides them through a system of deflection rollers to the traversing spooling device.

Theoretically, the product has reached its final condition long before the stranding rotor. This can be exploited by adding steps to the stranding process, such as filling with petroleum jelly, swelling powder, or talcum powder; insertion of insulation; longitudinal water sealing with film or tape; labeling; spinning with thread; and shielding with film, tape, or wire.

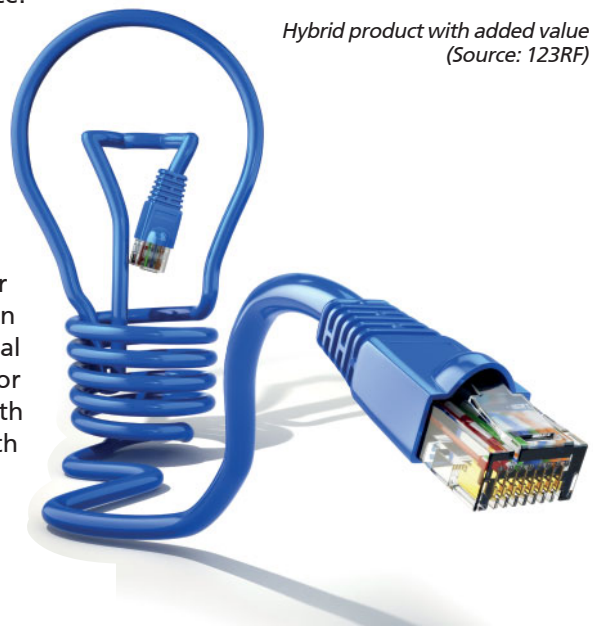
Central winding spinners are an important com-

ponent of fiber optic cable stranding machines, on which the speed of an entire production line largely depends. A central winding spinner is used to twist a thread in a screw shape around the fiber optic cable. The spun material, e.g. aramid or cotton yarn, lies in the rotational axis and the cable is fed through the machine's central opening. Next, during binding, the thread passes through a series of rollers, deflection rods, or thread guides, applying it to the cable in a helix shape. As the rotational speed of the central winding spinner increases, the cable machine's line speed increases automatically.

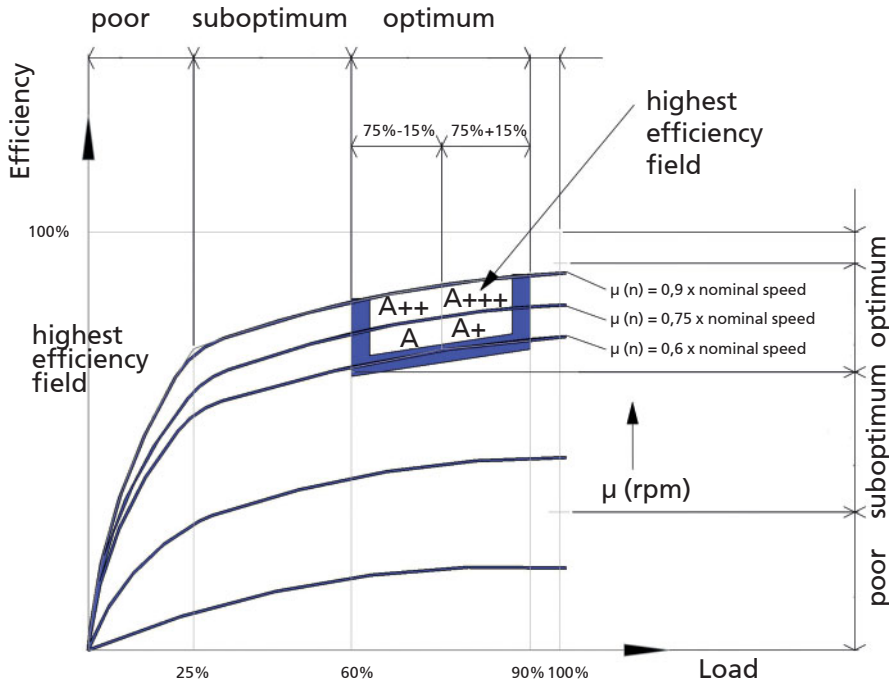
Until recently, having a refined CVT process with drive and control components optimized for the machines and parameters was decisive for boosting productivity and effectiveness of mechanical processes in cable production.

Intrinsic advantages of networked CVT drive technology

Conventional systems are characterized by "one motor, one transmission, one inverter" and follow European standard EN 50598. By contrast, a networked CVT drive consists of: at least one servo amplifier/inverter; two rotary current servo motors, rotary current asynchronous motors, or synchronous reluctance motors; and a planetary linkage via a heavy-

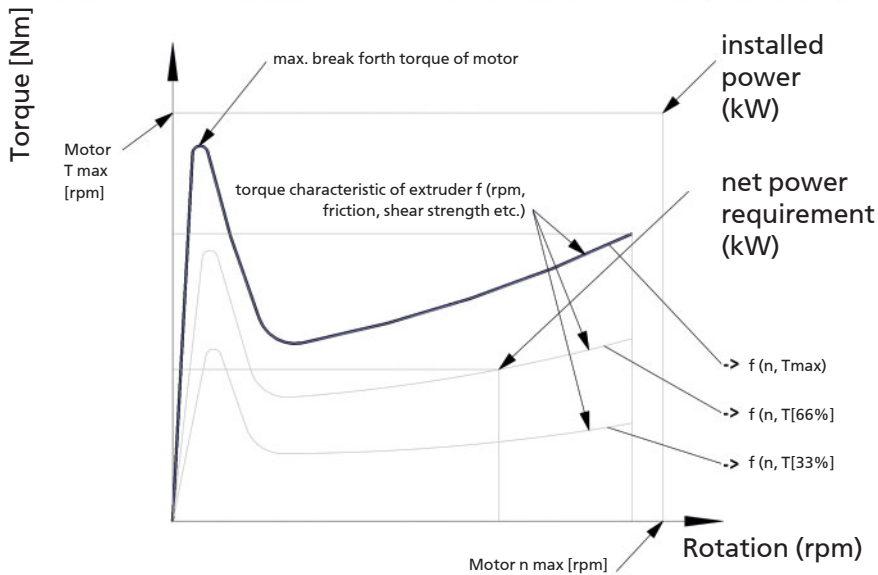


*Hybrid product with added value
(Source: 123RF)*



Typical characteristic curve from the cable industry (Source: Kabel.Consult.Ing)

Application with „constant torque drive“ and 1 Motor / 1 Gear unit / 1 Controller



Efficiency curve of a motor (Source: Kabel.Consult.Ing)

duty timing belt. Substantially higher overall efficiency is the result. This makes it possible to use lower-output motors with reduced operating costs, leading to several intrinsic advantages:

- Optimization of drive performance with a motor-driven application and

therefore minimization of energy costs;

- Optimization of generator output with a generator-driven application and therefore maximization of energy output;
- Standardization of the drive components on an individual machine,

in a single system or department, in the entire plant or company, in one industry, nationally and internationally;

- Standardization of new services, products, and business models related to the IoT trend “networking and digital transformation in drive technology”.

The advantages of the overall drive system are the same as for all modularization efforts.

- For machine developers: lower development costs, economies of scale in production, multiple series of the same type, and consistent and therefore simpler assembly processes.

- For machine operators: the ability to exchange single faulty modules makes repairs fast and economical. Compatibility and reuse of components minimizes spare-part stocking expenses.

- Consistent modularity greatly increases clarity and acceptance both on the manufacturer (sales, assembly, startup, spare parts service) and user (purchasing, operation, maintenance) sides.

What role will classical mechanics and electronics play in the digital era? Networking and digital transformation, combined with business models based on new service opportunities are very important for any national economy. But solutions designed to boost sustainability of resources, energy efficiency, or the recycling economy will continue to grow in significance. Accordingly, mechanics as well as electrical, drive, and mobility technology will remain the heart of industrial production.

Author: Juan Carlos González Villar, Owner Kabel.Consult.Ing

To expand sustainable production, west African blown film manufacturer Asahel Benin Sarl. has ordered a second Coperion compounding system specifically for manufacturing bio-based compounds. This system, built around an STS 65 Mc¹¹ twin screw extruder with side feeder, includes four Coperion K-Tron feeders for high-accuracy feeding of powders, pellets and liquids, as well as an SP 220 treasure strand pelletizer with a water bath and an air wipe



Blown film manufacturer Asahel Benin chose a Coperion compounding system built around an STS 65 Mc¹¹ extruder to further expand production of bio-based compounds (Photo: Coperion, Stuttgart)

Blown Film Manufacturer in Benin Expands Biocompound Capacity

This new compounding equipment serves to expand upon Asahel Benin's pilot system from Coperion which the company has successfully used to manufacture biocompounds since Benin's July 2018 prohibition of plastic bags and packaging. Asahel Benin processes these biocompounds on its blown film machines into biodegradable bags and packaging, making the company a pioneer among west African manufacturers of more environmentally friendly short-life plastic products.

The new STS 65 Mc¹¹ extruder and its peripheral equipment are currently being installed on site. Asahel Benin will begin production on this machine in spring 2021.

Compounding Technology with High Flexibility

Coperion designed Asahel Benin's compounding machine to be very flexible in order to achieve maximum freedom in the production of biocompounds. For example, thanks to the highly accurate Coperion K-Tron feeders, the system can

handle a variety of raw materials, depending on the recipe.

The four loss-in-weight feeders include two T35 twin screw feeders, one S60 single screw feeder as well as a liquid feeder. While the S60 single screw feeder offers an optimal delivery of free-flowing materials such as base resin pellets or granulates, the self-cleaning action of the T35 twin screw feeders makes them ideal for feeding particularly difficult powder additives, such as starch or calcium carbonate. Both T35 twin screw feeders are equipped with Coperion K-Tron's unique ActiFlow™ smart bulk solid activator which reliably prevents the formation of material bridges or ratholes in the hopper. All four feeders are mounted on platform scales which feature patented Smart Force Transducer (SFT) single wire weighing technology. These scales provide accurate, stable and reliable digital load measurement under a broad range of operating conditions. Together with the fast sampling rate of the KCM-III feeder controller this advanced weighing technology results in extremely high short-term accuracy, which is particularly important in continuous extrusion processes.

The biodegradable polymers are melted in the process section of the STS 65 Mc¹¹ extruder, and non-meltable components, such as starch, are plasticized. Intensive dispersion and devolatilization of the melt results. After passing through the die head and nozzle the extrudate goes through a water bath for strand cooling, the strand surfaces are then dried using

an air wipe, and the compound is finally pelletized in an SP 220 treasure strand pelletizer.

Coperion ensured that all of the product-contact machine parts have high wear protection, further increasing operational flexibility. Asahel Benin will be able to process various raw materials, even highly corrosive and abrasive ones, on this compounding system for many years to come.

Sustainable Corporate Strategy

Since 2018, the import, production, sale, and possession of petroleum-based plastic bags and packaging has been banned in Benin. Prior to that time, Asahel Benin Sarl. had used both new PE pellets as well as recyclates for manufacturing the films that were then used predominantly in household products and in shopping bags for supermarkets.

The new law was at once both a challenge and an opportunity for Asahel Benin. The company switched its production completely to bio-based plastics. Following a successful test and training phase at Coperion's Test Lab in Stuttgart, Asahel Benin Sarl. began manufacturing biodegradable compounds using a laboratory system built around a ZSK 26 Mc¹⁸ in its home country. The company then processes these materials into biodegradable bags and packaging on its blown film machines.

Coperion GmbH
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www.coperion.com



Coperion K-Tron high-accuracy loss-in-weight feeders can be outfitted with an ActiFlow smart bulk solid activator to prevent ratholing and bridging of difficult powders (Photo: Coperion K-Tron, Niederlenz)

2020 was an unprecedented year for the world. The plastics and rubber industries have undergone rapid changes, and the downstream users are more urgently in need of innovative and practical solutions than ever before. How to grasp the infinite market opportunities in 2021? CHINAPLAS, to be held during April 13-16 in Shenzhen, PR China, together with a series of exciting concurrent events, to explore hot topics like 5G, digital manufacturing, circular economy, antibacterial & sterilization etc. with the shareholders in the industries



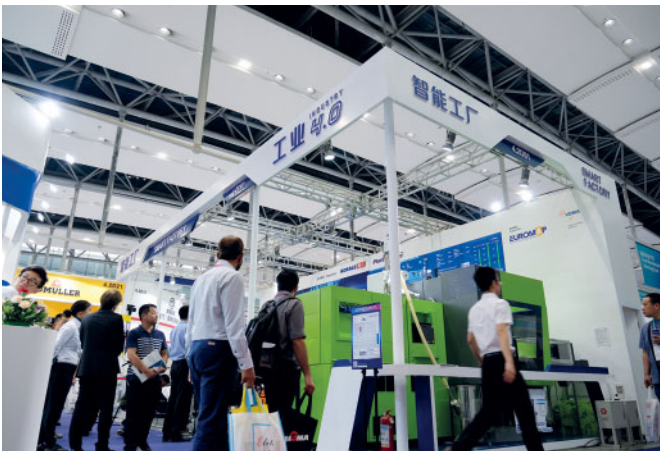
CHINAPLAS 2021 – Concurrent Events Unveiled

Circular economy impacts significantly on the global plastics and rubber industries. It is not only a hot topic around the world, but also implies a huge business opportunities for a brand new market. A successful and sustainable

circular economy requires the support and collaboration across the entire value chain from material manufacturers to brands and end consumers.

The 2nd edition of CHINAPLAS X CPRJ Plastics Recycling & Circular Economy Conference and Showcase will be held on April 12, one day before the commencement of CHINAPLAS 2021. The event aims at gathering visitors with common beliefs and goals to explore the implications of the circular economy from different perspectives, such as the global trends and policies of plastics recycling, the experience of waste separation for recycling in leading regions, innovative ideas and achievements of plastics recycling, etc.

Digitalization went full steam ahead in 2020. “Industry 4.0 Factory of the Future” demonstrates the benefits brought by Industrial 4.0 and digital manufacturing, including improved customer and supplier engagements, optimizing production efficiency and cost-effectiveness, driving continuous production, and automated process monitoring and quality control.



The event aims to illustrate the pain point during the advancement of smart manufacturing such as frequent production stoppage, time-consuming processes to trace the reason of malfunction, high cost as well as the urgent need for production plan adjustments, remote maintenance and monitoring. It offers practical solutions from three aspects for users, including Smart Factory to present the actual operation of the factory of the future. "Industry 4.0 Factory of the Future" is organized by Adsale Exhibition Services Ltd. & iPlast 4.0 Pte Ltd. and jointly organized by Europe's Association for Plastics and Rubber Machinery Manufacturers (EUROMAP), VDMA and OPC Foundation.

Product design is an integral part of a successful brand. The 6th edition of "Design x Innovation" will present Asian creativity in the New Era. It allows participants to experience how plastics technology inspires brand owners' innovations in product details to add brand value under the three themes - Design for Sustainability, CMF Design & Technology and Smart & Healthy Living x Plastics. Technology will change everything! "Tech Talk", the "flagship" concurrent event of CHINAPLAS, has been held for four years, and has become an influential platform for releasing innovative technology. More than 40 experts will present the latest, hottest and most advanced products and technologies under 6 different themes. This year, "Tech Talk" continues to highlight the practicability and innovation, providing an effective platform for professional buyers to grasp the industry trends.

The pandemic has significantly amplified the market demand for medical and health products. The attentiveness to this industry is expected to increase continuously. Riding on the previous success, the "Medical Plastics Connect" has become a key event of CHINAPLAS, helps promoting high-tech medical technologies and products particularly after the pandemic.

Three thematic seminars will be organized under "Medical Plastics Connect", focusing on the discussion and release of plastics technologies related to antibiosis and sterilization, medical 3D printing, biocompatible & bio-



degradable materials and intelligent health products. Medical devices, consumables and medical packaging will be promoted via online and offline marketing channels. Meanwhile, the Medical Plastics Guidebook will be launched for the effective dissemination of innovative medical plastics solutions.

Promotion of Total Solutions

Davis-Standard will market total solutions encompassing product capabilities and support services at booth #R11, Hall 10 during Chinaplas 2021, April 13-16, in Shenzhen, China. After so many COVID-19 show cancellations, the team looks forward to reconnecting with customers and the greater plastics community. Global aftermarket services and equipment technology for sheet, foam, blown film, thermoforming, pipe, profile and tubing, cast film, extrusion coating and liquid coating will be promoted

Specific to Asia, Davis-Standard's high-output systems for medical tubing, cast film, blown film and extrusion coating have been essential to medical and packaging applications. The company's installed base continues to grow as do vertical opportunities in aftermarket upgrades and optimization of lines to improve performance. This includes opportunities for more efficient processing, reduced waste and long-term sustainability to support profitability and better products.

Davis-Standard (Suzhou) Machinery, Co., Ltd. is central to the company's customer focus and expansion in Asia. Developments in the areas of machine building and assembly, inventory and aftermarket services, field service engineering, and installation at customer sites have been essential to supporting customers. Suzhou is also the site of R&D capabilities for testing rigid and flexible packaging products. In 2019, Davis-Standard added a 35,000 square-foot (3,251 square-meter) facility near

the existing Suzhou shop to house control panel assembly and provide warehousing.

Davis-Standard will highlight its dsX flex-pack™ 300S during the show. This single station extrusion and lamination line is a collaboration between Davis-Standard's design teams in the U.S., Germany and China, and is built at the Suzhou facility to meet the requirements of the Asian flexible packaging market. It is advantageous for converters as it accommodates the pricing, machine footprint, output, and key technical attributes demanded by Asian customers. The 300S can support web widths from 650 to 1,350mm, and is engineered for processing rates up to 300 meters per minute for paper, film and aluminum foils with direct gravure primer coating and coextrusion lamination stations. Hallmarks of the line include consistent end-product quality, greater uptime and productivity, reduced waste and application versatility.

Pictured is the dsX flex-pack™ 300S extrusion and lamination line, built specifically for the Asian flexible packaging market



Smart factory solutions will also be presented as plants worldwide move toward greater efficiency. Building on their knowledge of machinery and processes, Davis-Standard has incorporated interconnectivity and functionality via the Industrial Internet of Things (IIoT) to analyze real-time KPI's and enable alarms or action prompts via a machine control system. This system, the DS Activ-Check™, monitors key parameters of a converting line (extruders, laminators, casting section, coaters, unwind, winders) to provide early notifications of potential failures and valuable data for process improvement using configurable dashboards.

Booth visitors can expect to find information on every Davis-Standard product line, including equipment technology from recent acquisitions. Maillefer has delivered wire and cable and pipe and tubing equipment on a global level, complementing the FPVC medical tubing and coextrusion applications supported by the Suzhou location. This includes pipe and tube systems for automotive, heating and plumbing, irrigation, medical, micro-duct, off-shore and custom lines. Adding Brampton Engineering has further supported regional infrastructure for blown film applications. Thermoforming Systems LLC (TSL) has enabled Davis-Standard to offer solutions in sheet extrusion, tooling, automation, and granulating to support thermoforming applications, such as cold drink cups/lids, fast food take-out containers, clamshells and noodle bowls, fruit punnets and coffee pods. Most recently, the addition of Deacro Industries has increased equipment options with high-performance slitting, rewinding and roll handling equipment for the converting process of paper, film and foil materials.

► Davis-Standard, LLC
1 Extrusion Drive, Pawcatuck,
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davis-standard.com/event/chinaplas/

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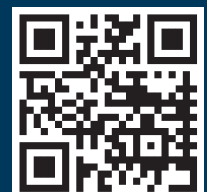
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BKG® pelletizing and melt delivery equipment from Nordson Corporation are emerging as more advanced alternatives for meeting the strong demand in China for ABS and SAN resins. The company will highlight this equipment at Chinaplas 2021, with a special focus on the Optigon™ process water filtration system, which dramatically reduces energy use in underwater pelletizing (Hall 10, Booth 21)

Optigon™ Process Water Filtration System



Complete Underwater Pelletizing System Improves Productivity, Pellet Quality, and Economy

While BKG underwater pelletizers (UWPs) are used for a wide range of olefin and styrene polymers, producers of ABS and SAN materials have traditionally used strand pelletizers. In comparison, UWPs yield enhanced pellet quality, are more compact, generate less dust, are not affected by strand breaks, and are more capable of automation. In addition, Nordson supplies key ancillary systems designed for high-volume pelletizing lines with minimal downtime. These include BKG BlueFlow™ melt pumps, which provide uniform melt pressure at levels required for efficient pelletizing; and BKG LK-SWE dual-piston melt filtration systems, which maintain continuous production during screen changes.

The BKG Optigon process water filtration system removes dirt and fine particles from the water used in underwater pelletizing while reducing overall energy consumption by 10 to 17%.

“Demand for ABS and SAN is now growing most rapidly in China, where the toughness and surface aesthetics of ABS are needed in the surging market for durable consumer goods and automotive components, while SAN provides strength and optical properties valued in consumer electronics,” said Aaron Kong, sales director of pelletized systems for Greater China. “We have supplied our BKG pelletizing systems to resin manufacturers in China and neighboring countries, and we support these customers from the Asian headquarters of Nordson’s Polymer Processing Systems division in Shanghai. Our pelletizing

laboratory here is available for product demonstrations and customer trials.”

Substantial Energy Savings in Underwater Pelletizing

The Optigon water filtration system eliminates need for a separate fines-removal sieve, which in standard systems requires a secondary, dedicated water pump. Instead, all filtration is provided by a drum filter, whose 70-micron screens are finer than the 150-micron screens used in standard systems. Driven by a small motor, the drum rotates within the water that is circulated throughout the pelletizing system by the main process water pump. The filtration system is designed so that dirt and fines stay confined inside the drum until they are evacuated into a collecting basin outside the tank.

By eliminating the secondary pump, the Optigon water filtration system uses only 1,440 kW per year (measured at 8,000 hours), as against 44,000 kW and 98,480 kW for the company’s Opti-Line™ and Poly-Line™ systems, respectively. Since water filtration typically accounts for 10 to 17% of the energy consumption in underwater pelletizing, the energy efficiency of the Optigon system means that overall consumption is cut by nearly that much.

► Nordson Corporation
www.nordson.com

Nordson Polymer Processing Systems
www.nordsonpolymerprocessing.com

Think Big, Think Smart – Extra-Wide CPP-Lines for Maximum Cost-Efficiency at High Volumes

When it comes the production of CPP film, i. e. for the metallised packaging of food and textiles, there is a clear trend towards high-volume production. But is the ability of to manufacture high quantities at good qualities alone enough to get the edge in today's markets? SML has the answer

"We from SML would say that machinery, that is reliably delivering premium-quality film in constantly high volumes is a prerequisite. But at the end, the final key to commercial success are productivity and low unit costs," says Huang Zefeng, Sales Manager Cast Film Extrusion, China. This is why SML is continuously further-developing the widths of its CPP lines in accordance with raising maximum output quantities. This happens especially with regard to the markets in Asia, where SML premium CPP lines with a width of more than 5 me-

ters are in operation for years. Recently, SML sold two extra-wide CPP lines with film widths of 6.5 meters and with an output-capacity of up to 20,000 metric tons per year to Asian customers.

Bringing unit-costs down

Compared to other lines for CPP film, SML's extra-wide CPP lines have a considerably lower ratio of edge trims. Additionally, the inline feedback of the edge trim scrap by a scraptruder essentially contributes to its commercial success. Labour costs per unit on extra-wide lines are also lower, as they do not require additional personnel to produce higher volumes. And also in terms of power consumption (kW/kg), extra-wide lines clearly beat smaller CPP film machinery.

CPP films for metallisation: perfect conditions for premium qualities

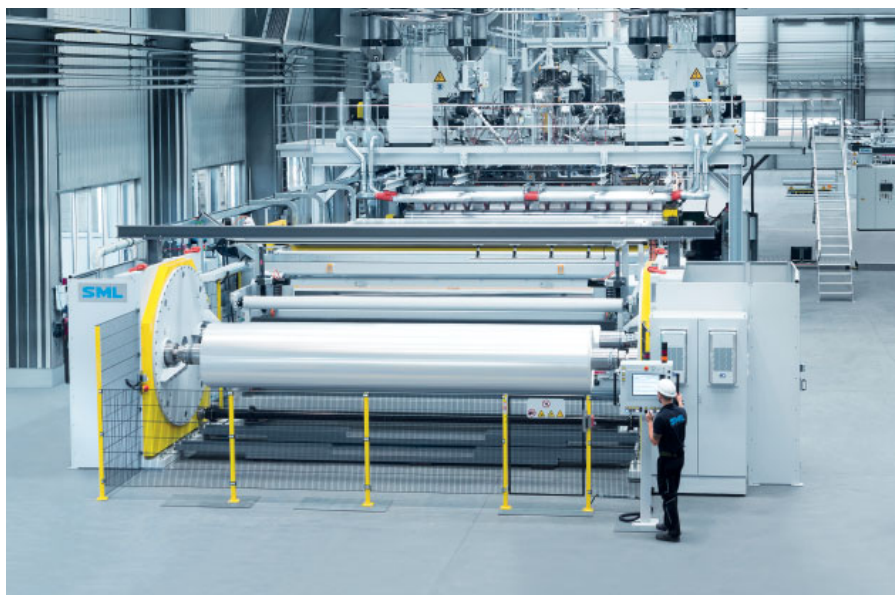
A frequent extruder-combination in SML's extra-wide CPP lines is Ø 180/90/90/90/90mm. Extruders from SML, which produce CPP films for metallisation in a subsequent separate pro-

cess, are additionally equipped with disc or candle filters. These large area filters are capable of eliminating even small gel particles. This avoids defects in the film at the following metallising process. For extra-wide CPP cast film lines, SML recommends its turret winder W6000 with a maximum outer roll diameter of 1,300 mm. Bigger roll diameters are a major boost in production efficiency for the manufacturing of metallising CPP films. Due to longer running times at the metalliser, there are less roll changes with less film waste. SML's turret winder W6000 enables a roll length of 50,000 meters or – 50 km! – of 25 µm film.

Quality, reliability, service

SML is a globally reputed technology leader for extrusion systems with branch offices in Beijing, China and Kuala Lumpur, Malaysia since more than 25 years. Machinery developed and manufactured from SML stand for high standards in terms of reliability, longevity and output quality. Partnering with SML provides you a reliable project implementation and a proven track record of adhering to the agreed times, costs, and performance values. Our representative office in Beijing offers comprehensive support to customers all over China: especially when it comes to in-depth technical information about our products, the flexible organization of on-site services by SML technicians located in China or the fast shipments of wear and spare-parts.

Extra-wide lines for maximum cost-efficiency



► SML Maschinengesellschaft mbH
Gewerbepark Ost 32, A-4846 Redlham,
Austria
www.sml.at, www.sml.at/zh-hant

The PURITY SCANNER ADVANCED detects metallic contamination inside the pellet as well as black specks and burns on the pellet's surface

Meet SIKORA at Chinaplas 2021
(booth 10 G05)

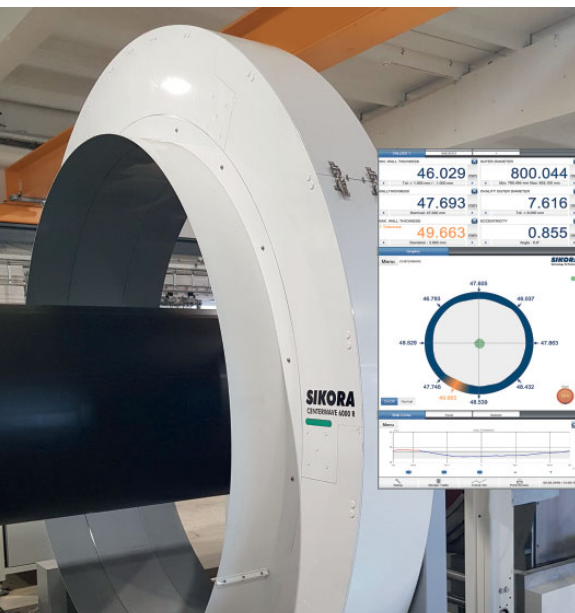
At Chinaplas 2021, from April 13 to 16, 2021, in Shenzhen, SIKORA will present its innovative measuring, control, inspection, analysis and sorting systems. At the SIKORA booth, visitors can expect a comprehensive portfolio of devices for quality control, process optimization and cost savings in the pipe, hose and tube as well as plastics industries



Innovative Measuring, Control, Inspection, Analysis and Sorting Systems

For online inspection and sorting of plastic material, SIKORA showcases the PURITY SCANNER ADVANCED.

The CENTERWAVE 6000 for online pipe dimension measurement in extrusion lines will be presented at Chinaplas



The system uniquely combines an X-ray with up to three optical cameras. Therefore, metal inclusions with a size down to 50 µm in the raw material can be detected. Furthermore, black specks and burns on the pellet's surface are detected by the optical cameras. Faulty pellets are separated immediately after detection via compressed air. The integrated software provides the operator with a statistical evaluation including information about the size, area and number of the detected contaminants during production.

For a 100 % quality control during the extrusion of pipes, SIKORA exhibits the CENTERWAVE 6000, a system based on millimeter wave technology. The device precisely measures the diameter, ovality, wall thickness, the inner profile as well as the sagging of the pipe. The measuring principle does not require any coupling media or calibration and is not influenced by temperature or the plastic material. "The easy operation of the

CENTERWAVE 6000 and its precision lead to the highest quality of the final product as well as cost savings and optimal efficiency." explains Wanbin Chen, President of SIKORA China, and adds, "We look forward to joining this year's Chinaplas and to meeting our customers at the trade-show."

The X-RAY 6000 PRO is a further highlight at the SIKORA booth. It measures the wall thickness, eccentricity, the inner and outer diameter and the ovality of hoses and tubes. Hereby, the thickness of up to three different material layers is measured. SIKORA's presentation in Shenzhen is completed by reliable diameter measuring systems of the LASER Series 2000 as well as LASER Series 6000, which in addition also offer a lump detection.

SIKORA AG
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www.sikora.net

Leading Technologies on Display at Chinaplas 2021

MAAG Group, a broadly diversified global solutions provider of Pump & Filtration Systems, Pelletizing & Pulverizing Systems, Recycling Systems and Digitalization for use in the polymer industry is showing its latest innovations at Chinaplas 2021 in Shenzhen, China, from April 13-16 in hall 10, booth 10Q01

The highlight of the booth will be the ERF350, a high-performance melt filter for the filtration of heavily contaminated polymer feedstock. The filter is self-cleaning with a rotating, perforated drum, through which there is a continuous flow of melt from the outside to the inside. A scraper removes contaminants that are held back on the

ETTLINGER ERF350, a high performance melt filter for the filtration of heavily contaminated polymer feedstock



surface and feeds them to the discharge system. This enables the filter to operate automatically, without disruptions over long periods and without having to replace the screen. The advantages: ultra-low melt losses and good mixing and homogenizing of the melt.

Another highlight in the MAAG Group booth is the PEARLO® underwater pelletizing system for the highly efficient and flexible production of spherical pellets with throughputs of up to 36,000 kg/h. Compact and modularly structured, it requires only a very small footprint. Electronically controlled EAC technology guarantees precise pressure of the pelletizing knives during operation, thereby enabling long runtimes free of interruptions with consistently high pellet quality.

In the same equipment segment, MAAG Group shows a BAOLI®-3 third-generation dry-cut pelletizer for processing hard and soft materials. The key components of these pelletizers are manufactured in Germany, and all versions meet the requirements of applicable safety standards in Germany. Maag has more than 60 years' experience in pelletizers and has already installed around 800 BAOLI pelletizers in China. As with previous BAOLI generations, the automated cutting chamber locking system enables fast handling while supporting operator safety.

From its extensive range of gear pumps, MAAG Group will be presenting the extrex® gear pump in x6 class design at Chinaplas. As with all x6 versions, MAAG Group has completely re-engineered and redesigned the components, from the shafts through to the bearings and seals, and optimized the interaction of the components. Specially developed gear teeth with low compression allow very high pressures to be achieved with low shear rates. The result is a further increase in achievable product quality, volumetric efficiency, as well as production consistency and safety.

Presentation of the Full Range of Products and Services

VACUREMA basic – copyright EREMA



After a year's break, EREMA is particularly looking forward to this year's Chinaplas trade fair from 13 to 16 April in Shenzhen (Booth 10C45). Although, due to Corona, the machine manufacturer will not have a recycling machine on display this time, they will still be able to present the entire portfolio of services for PET recycling, post consumer recycling and recycling of production waste. Visitors to the trade fair stand will be looked after by the team from EREMA's Shanghai subsidiary. From the stand, customers and those interested in the products and services will be able to talk to people at the company's headquarters in Austria in hybrid meetings using video conferencing. This makes it possible for the company to offer customer-specific consultation

China is a very important market for EREMA, who have gained a significant increase in both orders and turnover. Now that China has had the Corona situation well under control for several months, teams of technicians who travelled from Austria were able to visit customers across the country for several weeks before the end of 2020 to start up several recycling machines. In March, a team will set out again and, following a mandatory quarantine period, will begin commissioning several more machines.

Recycling solutions for PET, post consumer and production waste recycling

EREMA recorded strong demand worldwide for recycling solutions for PET waste. With its proven VACUREMA® technology, the machine manufacturer offers a wide range of processing options for

applications involving direct food contact, such as the inline processes PET to sheet, PET to fibre, PET to strapping and PET to preform.

Growing interest is also noticeable in the post consumer segment. In Europe, the use of post consumer recycle has become a major topic in the plastics industry due to legal recycling regulations imposed by the European Union. By providing the technology, EREMA plays a major role in making recycle suitable for high-quality applications in the cosmetics and food industries, which in turn opens up new sales markets. The FDA (U.S. Food and Drug Administration) confirmed in August 2019 that the recycling process based on an INTAREMA® TVEplus® ReGrindPro® machine plus ReFresher module is suitable for the production of milk and juice bottles, as well as meat trays, disposable tableware and cutlery,

provided the input material comes from milk and juice bottles. In November 2020, the FDA confirmed an additional input stream and more application uses for the recycle treated using this process. In addition to all HDPE beverage containers, HDPE closures of HDPE, PP and PET beverage bottles can also be processed. Material containing up to 100 percent recycle can be used in the production of containers for direct contact with food of all kinds.

Because China supports companies looking to implement recycling solutions for production waste, EREMA also expects growth in this segment in the future.

EREMA is well set to handle increasing demand

In order to meet the increasing demand for its recycling technologies in China and worldwide, EREMA has doubled the area of its production site, by building a new production hall, and built additional warehouses and office buildings. They have also expanded the EREMA customer centre, where tests are carried out on a range of recycling machines using customers' input material.

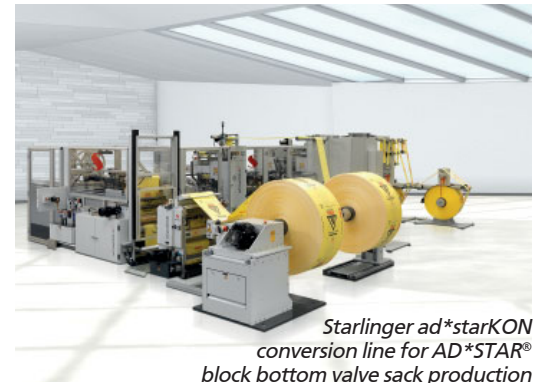
CHINAPLAS and CPRJ Plastics Recycling and Circular Economy Conference and Showcase 2021 – subforum: Advanced recycling technologies closing the loop of industry chain: 12 April, 8.30 am – 12.30 pm, Presentation by James Qiu, General Manager of EREMA's Shanghai subsidiary, on the topic: "Plastic recycling technology made by EREMA: up to 100% recycled material – from post-consumer waste to high-quality product"

EREMA headquarters Ansfelden (copyright Techquadrat Werbetechnik)



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*AD*STAR block bottom valve bags and post-consumer plastics recycling are the two main topics that Starlinger & Co. GmbH will focus on at Chinaplas in Shenzhen, China*



Starlinger ad*starKON conversion line for AD*STAR® block bottom valve sack production

Technologies for Cement Packaging and Plastics Recycling

After the publication of the new National Standard for Cement Packing last October, block bottom valve bags made of coated PP tape fabric are highly sought after. Until March 2022 Chinese cement producers have to switch their packaging to one of the three cement sack types specified in the Standard. Among them: AD*STAR block bottom valve sacks made of plastic fabric, which have been developed and patented by the Austrian engineering company Starlinger.

“Since it has been established that the Starlinger AD*STAR block bottom valve sacks meet the specifications of the National Standard, demand for them in China is skyrocketing”, says Herman Adrigan, Head of Sales at Starlinger. “We are delivering conversion lines for an additional 2 billion AD*STAR sacks to China until 2022. The focus of our division Starlinger textile packaging at Chinaplas will thus be on AD*STAR production technology, although unfortunately we cannot present the latest technological developments live on a conversion line during the exhibition.”

A sustainable packaging for cement

AD*STAR block bottom valve sacks are made of laminated polypropylene tape fabric using a specially developed welding process. Contrary to blown film or kraft paper, the plastic fabric is extremely durable and break-resistant and protects the content from moisture. These characteristics make AD*STAR sacks a very sustainable cement packaging solution

because they help to reduce CO₂ emissions during cement production: Less cement loss caused by ruptured sacks or hardened cement in the course of the transport and logistics chain means that less cement needs to be produced for replacement – and consequently, less CO₂ is emitted.

Other important advantages of AD*STAR block bottom valve bags:

- Perfectly suited for automatic filling and palletising
- The polypropylene coating ensures tightness and avoids leaking of the product
- Adjustable air permeability due to optional microperforation – reduces dust formation and protects against humidity (improved shelf life)
- Fully automated sack production on Starlinger ad*starKON conversion lines
- Attractive sack design on all visible surfaces for better brand advertising

Concentrated know-how in post-consumer plastics recycling

At this year's Chinaplas, Starlinger recycling technology is focussing on post-consumer recycling. Be it post-consumer waste such as rigid plastic packaging, bottles, containers or films made of HDPE, PP, PE or PET – Starlinger has the recycling solution for it. In the field of PET recycling Starlinger is one of the leading technology providers: The PET regranulate produced on Starlinger lines can be used in applications with direct food contact, which has been confirmed by more than 50 positive EFSA opinions,

FDA (US Food and Drug Administration) approvals as well as by various brand owners.

Starlinger also offers FDA-approved recycling solutions for the production of food grade regranulate from post-consumer HDPE packaging such as milk and beverage bottles. The regranulate can be used again in packaging for direct food contact.

No more odours in recyclates

Especially regarding post-consumer plastics, odours are a central topic. If for example HDPE packages of sanitary products are recycled, the produced regranulate frequently smells of the packaged liquids. This also often happens with LDPE post-consumer films from household and agricultural waste. Starlinger's odour extraction technology solves this problem by removing the substances that cause the odour – because if they remain in the regranulate, unwanted smells can develop during the manufacture of new products. Starlinger C-VAC modules and odour extraction units for effective odour reduction are being used successfully in many different applications by now.

Note: AD*STAR® is a registered trademark. AD*STAR® sacks are produced exclusively on Starlinger machinery.

Starlinger at Chinaplas: 13. – 16. April 2021, Hall 10, Booth A41

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