



## high-tech & function

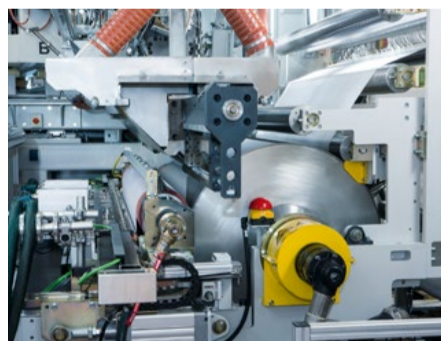
### SML offers production line for hygiene protective materials

Hygiene protective clothing is in high demand in these difficult times and worldwide production capacities are limited. SML has available a completely equipped production-size FlexPack® line including its patented DoubleCoat process at its Austrian headquarters. The line is perfectly suited to manufacturing materials for hygiene applications like protective clothing and surgical coverings. The line is offered to customer trials; it can also be purchased directly from SML with a very short delivery time.

SML's FlexPack® line manufactures high-tech functional materials with outstanding properties. Laminates in combination with monolithic membranes (such as TPE) provide a highly effective barrier against viruses and bacteria. The material's breathability and elasticity allow the

production of protective clothing with excellent wearing comfort.

- ▶ Functional clothing, i.e. breathable protective clothing
- ▶ Hygiene applications, i.e. breathable layers in napkins/nappies
- ▶ Medical applications, i.e. protective clothes and surgical coverings



**ADVANCED PROCESS TECHNOLOGY**  
SML's DoubleCoat technology integrated into FlexPack® extrusion coating lines, combine extrusion coating with hotmelt lamination, which has revolutionised the way in which very thin functional cloths and membranes are produced. On top of this, such lines are perfectly suited to conventional hotmelt lamination of breathable films and nonwovens, as well as extrusion coating and lamination. Absolutely tight and breathable materials can be manufactured on the same production line.

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#### Editorial

**Karl Stöger**  
Managing Director



Dear Reader,

As we are all experiencing, the current situation is anything but easy. Besides those who have been directly affected by Coronavirus, it is the lockdown of whole economies and the closing of borders that is causing the most disruption. No doubt, most of the restricting measures imposed by the various governments are appropriate and justifiable in this serious situation.

Like in other crises before, there are not only losers; of course there will be winners as well. New opportunities arise; those who are alert and prepared to adapt their business models will be the biggest beneficiaries. At SML, we consider it to be more important than ever to look at the essentials and the assets we own; both at an industry level as well as in the individual enterprise. In this way, we can draw on our strengths in the right way as the crisis starts to recede.

For some years now, the plastics and packaging industry has been in the public focus due to the discussions about plastic waste in the environment; the arguments surrounding this topic have not always been fair or well-founded. At least for the moment, media coverage has completely changed as this health crisis demonstrates impressively to all of us, how important our industry is for the whole of society. Not only that nearly all of the medical protective materials which are urgently required these days are made from plastic polymers, hygienic packaging materials made of plastics play a key role in food safety, logistics and security of supply. This pandemic once more makes it clear that our industry is of systemic importance; plastics are vital and, if used responsibly, they are an important part of our civilisation.

Finally, let me state that SML is in full operation as usual. We are well prepared for the months ahead and are looking forward to staying in touch with you. We hope to be able to welcome you to our Headquarters, or meet you anywhere in the world, at the earliest opportunity.

Yours faithfully,

*Karl Stöger*

#### Facts & Figures:

Products	Hygiene and technical applications plus flexible packaging
Product width (FlexPack®1800)	800 – 1,650mm
Coating weight	7 – 50 g/sqm (depending on product)
Coating layers	3-layer
Maximum speed	450 m/min (shaftless winding)

Extrusion lines –  
engineered to perform

# SmartCast Infinity

## Pilot plant on a production scale

Packed with state-of-the-art technology and innovations

As a special service to its customers and partners, SML has recently installed its new SmartCast Infinity stretch film line at its Technology Center. The pilot plant is available for demo runs and trials on a production scale – in all dimensions and without time limits.

“As the leading supplier of cast stretch film lines, we primarily developed the SmartCast Infinity to support our customers in finding solutions to future challenges relating to products and product development,” says Thomas Rauscher, Product Manager at SML. This unique line can provide in-depth answers to questions like: ‘What kind of system is best suited to producing ultra-power stretch film or SuperStiff film?’, ‘What kind of trim handling is recommended for a certain application?’ or ‘Which specific recipe do we need for coreless production?’.

### 7 + 1 EXTRUSION UNIT

The new SmartCast Infinity is packed with state-of-the-art technology and numerous technical innovations. The 3,000mm width net film solution reaches production speeds beyond 1,000 m/min. It has seven extruders plus one for encapsulation. Every extruder is equipped with 4-component dosing, whereas the skin extruders have a special low percentage dosing capability.

One unique feature of the installed dosing units is the Smartdrain, a tool for unloading material from each dosing unit to a



defined bin. The operator no longer needs to empty the dosing chamber manually. The seven extruders supply the stretch film material to a proven 13-layer feed block, connected to the latest Cloeren Reflex™ die. In combination with the X-ray gauging system, the SML Booster technology and the SML Automapping, manual adjustments on the die are no longer required.

### COOLING WITH ONE OR TWO CHILL ROLLS

The film is cooled by a 1,600mm diameter primary chill roll and a 400mm diameter secondary chill roll. Customers have thus the choice of running one or two chill rolls to determine whether the secondary roll is needed. A gel counter and the SML Film Temperature Measurement

(FTM) complete this state-of-the-art chill roll unit.

### UNIQUE WINDING AND TRIM HANDLING

The product is finally slitted and wound on SML's benchmark winder W4000-4S2T. With 2-inch or 3-inch cores, hand rolls, machine and jumbo rolls, ThinCore technology, coreless winding and ModifiedEdges, it offers infinite possibilities and capabilities second to none. For trim handling, SML offers another

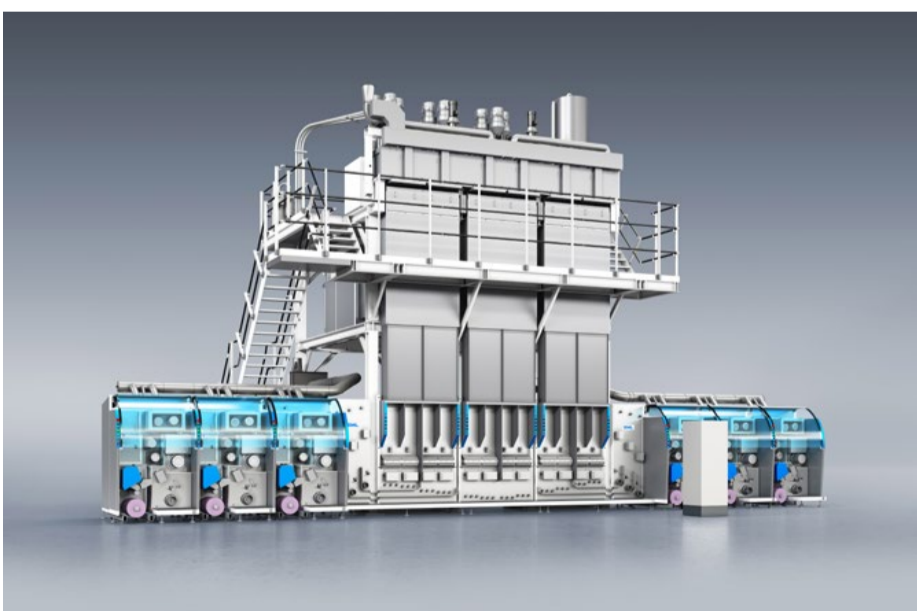
unique solution: the trims can be directly returned to the cycle by a combined grinder/scraptruder, or can be repelletised.

In addition to the new pilot plant, SML has an in-house Film Performance Tester (FPT) that can test and analyse film immediately after production as well as days later. Samples from customers are welcomed.

# Austrofil® BCF:

## Spinning in two production modes

The flexible production line combines the advantages of twin and tri-colour lines



SML is launching a flexible production line in the form of the new Austrofil® BCF PP Tricolour 6x2 spinning line. The spinning line combines the advantages of the existing and proven ‘Twin’ and ‘Tricolour’ line models. The line supports two differ-

ent processing modes: mode 1, for one large tricolour or monocolour batch with 12 ends and an output of 480 kg/h; and mode 2, for the simultaneous production of three different monocolour batches with 4 ends and an output of 160 kg/h each.

While production in mode 1 is specifically geared for high output of identical yarns, the three monocolour batches in mode 2 can be produced completely independently of each other, with different titers, filament counts and colours. Gravimetric loss in weight dosing systems are applied by standard to ensure best colour evenness and reproducibility of all products. Like all BCF spinning systems developed by SML, the new Austrofil® BCF PP Tricolour 6x2 line covers a wide titer range from 1,000 to 5,000dtex.

### NEW SPINPACK DESIGN WITH 700 FILAMENTS PER YARN

The Austrofil® BCF PP Tricolour 6x2 line is characterised by several innovations. The newly developed spinpack design enables the production of 700 filaments on each yarn end; higher titer ranges can also be processed at lower dpf levels. SML's patented and proven texturing technology guarantees highest product qualities and crimp levels.



### DIGITAL CONVENIENCE

Even though the line can handle huge production capacities, the machine height and footprint have been kept small to save precious space on the shop floor. The line control's new visualisation system offers more intuitive handling. Teamed with SML's bitWise data logging and analysis solution, this means that quality control and research can be handled with greater accuracy and maintenance can be planned in an even more reliable way.

Extrusion lines – engineered to perform

# High-end vacuum system

## For demanding applications

SML has developed a new series of vacuum systems for processing hygroscopic polymers which are sensitive to hydrolysis. The new systems are especially suitable for the extrusion of PET, PA or PLA and help to abandon time and energy consuming pre-drying processes, while keeping the final products at the highest quality levels.

The heart of the new series consists of dry-running, high-performance vacuum pumps with an efficient filtration system positioned upstream.

Compared with conventional water ring vacuum pumps, the main advantages of SML's new systems are the elimination of fresh water consumption, the high energy efficiency and the achievable vacuum levels.

While water ring vacuum pumps may provide absolute pressures down to 30hPa, SML's new solution is also capable of achieving absolute pressures below 1hPa.

Due to the modular design, suction capacities from 1,000 to 5,000 m³/h or more can be provided.

Like all machinery from SML, the new vacuum systems are characterised by the



precise interaction of high-end components. The hardware is made entirely from stainless steel and the intuitive machine control integrates perfectly into the HMI of the respective extrusion unit.

SML's new series of high-end vacuum systems were designed both for new extrusion units and for retrofitting of existing systems.

### Highlights at a glance:

- ▶ Vacuum systems for the extrusion of hygroscopic plastics without pre-drying
- ▶ Absolute vacuum pressures from 1 to 10hPa, suction capacity up to 5,000 m³/h
- ▶ Designed for the use in single screw and twin screw extruders
- ▶ Applicable to new extrusion systems and retrofits
- ▶ Modular design for either discontinuous or continuous operation
- ▶ High-end components and materials
- ▶ Energy-efficient and eco-friendly due to dry-running vacuum pumps
- ▶ Perfect integration of the systems' control units with SML's SMILE control system
- ▶ Developed by SML – first hand service by SML technicians

## Electronics retrofitting – making long-running extrusion lines fit for the future

Well-maintained SML extrusion lines are expected to perform for decades. But times change, and so do electronic components and machine control systems. To get the best out of older extrusion lines and to meet tomorrow's market requirements, SML is offering electronics retrofitting, customised to the customer's specific demands.



Investments in machinery from SML pay dividends, in both the short and long term. SML offers full end-to-end service support in all phases of the plant life cycle. And SML is offering retrofitting for older systems with the latest electronic systems and digital technologies to meet today's standards.

### AVOIDING DOWNTIME

Another important reason for retrofitting extrusion lines is the gradual discontinuation of older electronic components. SML has a limited stock for components which were discontinued in the past. Although, SML's suppliers offer a repair service for defective electronic components that cannot be easily replaced, there is no guarantee that the damaged part can actually be repaired. However, where components have to be repaired instead of being exchanged, longer downtimes are the consequence.

### CUSTOMISED SOLUTIONS

SML develops highly-customised retrofitting solutions in close cooperation with the customer. The spectrum ranges from replacing only the PLC (or all control components) to a complete plant retrofit. In this case, all the electrical parts are renewed, including all DC

motors, cables and control cabinets. The optimal solution for the customer depends on various factors such as the condition of the plant, the age of the plant, the products, and economic considerations.

### SUCCESS STORIES

The latest project of this kind was implemented with a long-time partner of SML, a film producer in Germany. In this project, the discontinued PLC components of an old sheet line were replaced with the latest models. Asked why the company decided to retrofit the PLC for the line, the managing director made the following statement:

“ The main reasons for the decision to upgrade the control system were operational reliability and the uncertain situation with regards to spare parts availability. All of this also with a view to helping save resources. It would be a real pity to replace a line that works well in itself with a new one, when you have the possibility to replace just the control system. The implementation was then carried out very professionally and quickly, as planned, without any major difficulties”.

A German film manufacturer about the reasons for retrofitting the PLCs of its old sheet line.

SML carried out another successful retrofitting project with an Asian company. The customer moved a 14-year-old coating line from China to India with the support of SML and put it back into operation there. During commissioning, extensive software updates and optimisations were implemented in line with specific customer requirements.



## SML delivers high-performance sheet line for FFS packaging to Maghreb

The line has a production capacity of more than 1,500 kg/h on four webs with a maximum total width of 1,600mm. Due to this high output in combination with an outstanding product quality, the line is a top-of-range solution for polystyrene dairy product packaging.

It is the second line installed at a dairy packaging film manufacturer's facility in Maghreb, taking production capacities and film qualities to the next level. SML considers high flexibility, reactivity to demands and unbureaucratic solutions in technical and organisational matters essential, especially in these rapidly-developing markets. "SML is a company we always can rely on", stated the customer, explaining the decision to continue to grow together with SML.

# Climate Change: Plastics as part of the solution



Climate change is an urgent and highly emotional topic; and more often than not, the discussions about climate-damaging emissions and plastic waste are irrational and confusing. High time to get the facts right and shift the focus to the real challenges.

Products containing plastics are a genuine part of our civilisation. Most plastics still are made from fossil resources, but

unless plastics are burned, their carbon footprint is similar or lower than those of other industrially manufactured materials like glass, paper, cardboard, aluminium or steel.

#### FOOD PACKAGING REDUCES GREENHOUSE GASES

As one third of all food produced in the world is wasted, plastic packaging helps to extend the shelf life of groceries

considerably. Reducing food waste with optimised packaging can reduce greenhouse gas emissions by 8 % according to the Austrian research project "STOP waste – SAVE food".\*

#### PLASTIC WASTE AS A VALUABLE RESOURCE

Plastic waste in the oceans comes among others from missing or ineffective waste management systems. In some countries, landfill is already prohibited and all waste is either used for energy recovery in incineration plants or is recycled. It is the global challenge of the plastics industry to boost the recycling rate on a global scale and to contribute

to the introduction of working circular economies all over the planet. It is time to consider plastic as valuable resource that must not be wasted.

We at SML consider it our task to handle our given resources carefully. As a leading manufacturer of machines for the plastics industry, we offer ready-to-go solutions that effectively help to minimise plastic waste and reduce the carbon footprint in the production of plastics for all kinds of applications.

\*Carbon dioxide emissions from the production of packaging materials have been taken into account.

It is time to consider plastic as valuable resource that must not be wasted.



## SML Sheet Performance Days –

Where new ideas meet new products

The Performance Days are a new series of events taking place in SML's Technology Center. Numerous visitors from several companies joined SML for the first Performance Days, dedicated to new technologies in rigid sheet manufacturing.

One central topic was the production of physically foamed A-PET for conventional packaging and for hot-fill applications. The centre of attention was SML's recently installed development line for thermoforming sheet. Above all, the rapid change from transparent, compact PET to physically foamed sheet in stable conditions impressed many visitors.

With film thicknesses up to 2.7mm, and suitable thermoforming tools made by SML's technology partner Kiefel, cups and trays with a temperature resistance of more than 100°C and perfect heat insulation properties can be produced on a large scale. The foamed middle layer of

this A-PET sheet contains up to 40 % recycled material, making the final products both convenient and eco-friendly.

The Performance Days will be held regularly and new dates will be announced in time.

### Why foamed A-PET?

- Reduced material consumption ▶ density reduction up to 50 %
- Use of post consumer recycled material ▶ bottle flakes up to 100 %
- Recyclable

Foamed A-PET for hot fill application  
Usable from -20°C to +100°C



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### Events 2020

Due to the current situation we keep you up to date at [www.sml.at](http://www.sml.at)