

SCHÜTZ

news

PACKAGING SYSTEMS

NEW HANDLING GUIDE

12

for the safe use of
SCHÜTZ PE drums

ENERGY SYSTEMS

16 Cool headed at the terminal

COMPOSITES

20 Production of CORMASTER®
components now entirely in
Siershahn

COMPANY

23 Further investments
at SCHÜTZ ELSA

PACKAGING SYSTEMS

Safety and continual
optimisation –
how SCHÜTZ organises
quality management

4



Contents

PACKAGING SYSTEMS

- 4 **Safety and continual optimisation –**
how SCHÜTZ organises quality
management
- 7 SCHÜTZ receives the **Operational
Excellence Award**
- 8 **IBC innovation programme:**
optimisation in line with customer needs
Optimising products through insights
gained in daily use
- 12 **New Handling Guide**
for the safe use of SCHÜTZ PE drums

ENERGY SYSTEMS

- 16 **Cool headed at the terminal**

COMPOSITES

- 20 **Relocation completed:**
Production of CORMASTER®
components now entirely in Siershahn

COMPANY

- 23 **Further investments**
at SCHÜTZ ELSA
- 26 **Ready for the future!?**
"Welcome Days" for 42 SCHÜTZ
trainees and taking over
of 37 young professionals
- 31 **MX 560** as part of an art project

4

SCHÜTZ quality management
for safety and outstanding quality.



16

At Cologne / Bonn Airport,
our AIRCONOMY® system ensures
a permanent supply of fresh air
and an optimal climate.



26

Welcome to the SCHÜTZ family!





12

The new Handling Guide is an essential manual for the safe handling of PE drums.



23

SCHÜTZ stands for the uniform quality of its products and production processes worldwide.



IMPRINT

Editor: Schütz GmbH & Co. KGaA
 Schützstraße 12, D-56242 Selters
 Phone: +49 2626 77 0, E-mail: info1@schuetz.net
 www.schuetz.net

Editorial office: Schütz Corporate Marketing (Veit Enders, Melanie Ievolo)

Text: hd...s agentur für presse- und öffentlichkeitsarbeit
 (Heike D. Schmitt, Stefan Krämer), www.hds-pr.com
 Sage & Schreibe Public Relations GmbH
 (Christoph Jutz, Stephan Hanken), www.sage-schreibe.de

Design: Bauch & Müller Werbeagentur GmbH, www.bauch-mueller.de

Print: Druckerei Corzilius e.K., www.corzilius-mediencenter.de

Picture copyright: www.shutterstock.com



Safety and continual optimisation – how SCHÜTZ organises quality management

Safety and outstanding quality are features that customers rightly expect from SCHÜTZ. They are exactly what our packaging is renowned for all over the world. To maintain these high standards, SCHÜTZ employs a sophisticated quality management system. This helps us to continuously improve our development and production processes and makes a significant contribution to the ongoing optimisation of our products.

Modern industrial production processes are practically inconceivable without effective quality management (QM), which has become a central driver for increasing efficiency in production and minimising the influence of risk factors. At the same time, quality management also acts as a trigger and guide for optimising products and manufacturing processes.

Globally standardised product and process quality

Quality management has been a central issue at SCHÜTZ ever since the company was founded and is firmly anchored at all locations worldwide. Every single production and management process at SCHÜTZ is structured, checked and certified according to recognised external standards (see info box). SCHÜTZ sets the highest standards for its packaging and goes far beyond the legal requirements. We ensure that our products are always manufactured to the same quality specifications at every location. To achieve this, we have established our own SHEQ management system, which ensures that products and processes meet uniform quality standards at all locations. This system defines in a standardised form process and work instructions, test plans and other specifications. The production sites are required to work according to these standards, taking local conditions into account, without diverging from the required central specifications.

Maximum vertical range of manufacture for maximum flexibility

Another important factor that ensures the consistent quality of our products worldwide is our maximum vertical range of manufacture. For example, we develop and build all the equipment, tools and moulds required for production in-house and manufacture all key IBC components ourselves. This makes us more independent from suppliers, gives us flexibility in responding to constantly changing market requirements and increases our innovative strength. The experience gained in the daily handling of our packaging is also extremely valuable, which is why we continuously incorporate the feedback and wishes of our customers.

As early as the development stage of new products, we use quality management tools, including risk analyses, statistical methods and detailed test planning. In addition, in this phase of product development we detail the planning for safe, process-compliant manufacturing. The aim is to design our products and their production processes economically and so safely that defects are avoided from the outset.

Another important factor that ensures the consistent quality of our products worldwide is our maximum vertical range of manufacture.



Automation of test procedures

Our packaging is tested in the various production steps. In this way, we continuously document full compliance with the requirements of our customers as well as all legal specifications and standards. SCHÜTZ is continually investing in the improvement and reliability of the tests. For example, manual measuring equipment or visually performed tests, which depend on the experience and skills of the employees, are being replaced by automated tests. Contactless measuring projectors, camera tests and thermographic measurements, each with automated evaluation, help to analyse the respective production results.

One of the advantages of extensive test automation and documentation is that the measurement results are not biased by the person performing the test. It also increases the testing speed: more random samples can be taken in the same period of time – an additional factor for more safety.

New CT scanner for high-precision measurements

In 2020, SCHÜTZ installed a CT scanner in a temperature controlled measuring room at the factory in Selters. The CT scanner allows high-precision measurements to be made of the components, even when they are assembled. With just one scan, the entire volume of the component can be documented. This allows targeted evaluations to be made, including verification of the characteristics that were defined in the series production specifications.

The CT scanner also analyses details that are not accessible with conventional inspection. For example, undercuts or cavities can also be viewed. Recording the entire component and its history by comparing multiple successive measurements as part of our series monitoring contributes to the continuous improvement of manufacturing quality.



The CT scanner allows high-precision measurements to be made of the components, even when they are assembled.

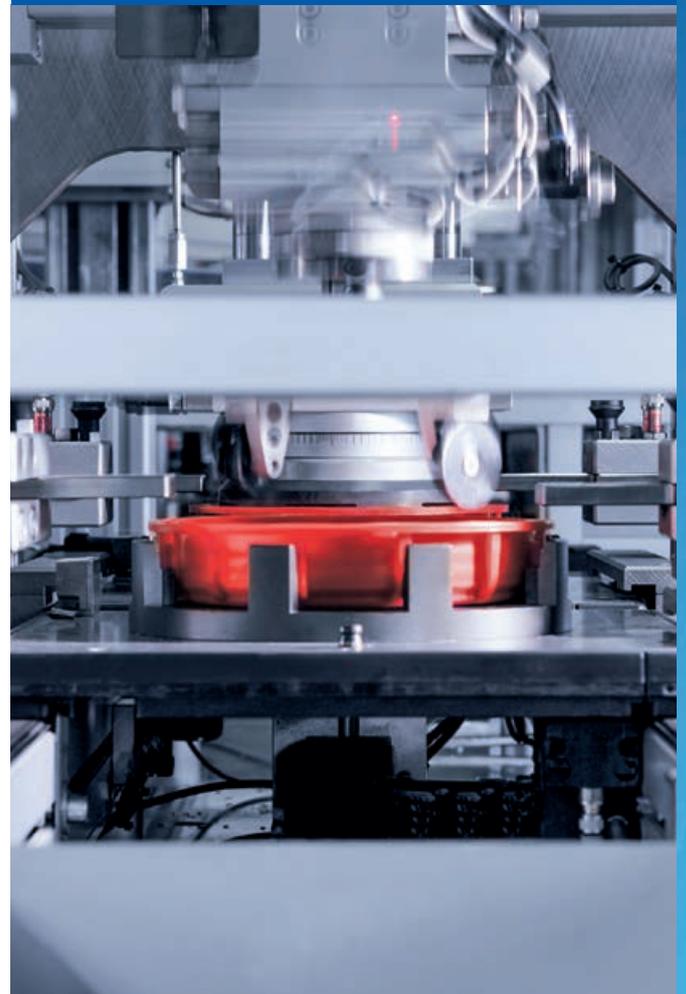
Continuous development optimisation

The CT scanner can be used to analyse not only individual components, but entire groups, such as assembled fittings or screw caps including integrated bungs. The data provided is extremely useful, especially in product development and complaint analysis. The CT scanner lets us analyse how individual components interact with each other. In the event of a complaint, for example, a CT scan can be performed directly after the item has been returned to allow the original condition of the defective part to be reliably documented. In this way, the product auditors, working together with the experts from production, process engineering, development and quality management, can contribute significantly to analyse the root cause. This allows corrective measures to be taken without delay, as well as enabling preventive measures to be planned to avoid such defects in the future. The results of these analyses also flow into future development projects and the part design of new products.

Correcting aberrations from the norm is one of the core tasks of quality management. However, the actual goal of our QM team in cooperation with all those involved in the process is to completely avoid errors and defects as part of SCHÜTZ's "Zero defects" strategy. The interaction of all quality management measures allows us to continuously improve products and processes along the way. This means that our customers can rely on SCHÜTZ quality at all times.

SCHÜTZ's production and management processes are structured, audited and certified according to recognised external standards:

- | | |
|--|---|
| + ISO 9001
(quality management) | + FSSC 22000
(food safety) |
| + ISO 9100
(aviation) | + Halal
(Islamic food requirements) |
| + ISO 14001
(environmental management) | + Kosher
(Jewish food requirements) |
| + ISO 45001
(occupational safety) | + AEO-CTPAT
(customs simplifications) |
| + ISO 50001
(energy management) | |



IBC innovation programme: optimisation in line with customer needs

Optimising products through insights gained in daily use

We make good things even better! This is the motto we apply as we continuously take our industrial packaging to the next level. Our goal is to improve the overall performance and handling properties of our extensive portfolio even further.

Our IBCs and drums are used millions of times all around the globe, providing us with a constant stream of new insights which we incorporate into our optimisation processes. Customer feedback on day-to-day handling plays a key role, and we regularly test our products to ensure user-friendliness, safety and robustness. This demands all our innovative strength! One of our crucial advantages is because we manufacture all key components in our own plants, we can quickly implement high quality modifications and innovations. Our decades of expertise in IBC manufacturing, combined with our closeness to our customers, allows us to develop and supply products that always meet current market needs.

SCHÜTZ outlet valve safeguard with intuitive operation.



Safety and quality are our top topics – and this also applies to our outlet valves, one of the most important components of our IBCs. Safety systems integrated in the valve protect the originality of the filling product and ensure that accidental opening or tampering are ruled out. One of our latest innovations in this area is the valve safeguard with intuitive operation. We already successfully introduced this for our DN 50 butterfly valves, and have now implemented it for ball valves. This new standard replaces the previously used steel screw and plastic safety clip. These two solutions were less practical in everyday use as both the screw and the clip could easily be lost.

The optimised safety device consists of a yellow tab that is integrated in the valve between the casing dome and the handle. Handling is simple and no tools are required: the latch is simply pushed upwards with the thumb. Repeated unlocking and securing of the valve handle is no problem. The device complies with the rules for transporting full and empty containers. Additional protection is provided by the tamper-proof originality seal which is attached to the valve during manufacturing. The seal breaks the first time it is opened, meaning that it is immediately visible if the IBC has been tampered with or the contents have been accessed.

A permanent bond

Our integrated valve types also guarantee enhanced safety. They are firmly welded to the inner bottle and not, as is usually the case, just screwed on. We have also transferred this proven valve design to our IBC models with an EVOH barrier. The barrier layer in the inner bottle of this special packaging protects sensitive filling products from permeation. Until now, these containers have been equipped with a screw-on fitting including an aluminium union nut. The new integrated variant with a welded connection offers the customer many technical advantages: it fits securely, cannot be twisted, and has exceptional dimensional stability. It is resistant to tensile loads that may be exerted on the valve by the use of heavy adapters, camlock systems or pump connections. Another aspect that our users particularly appreciate: the integrated outlet valve does not require a flange gasket. This reduces the risk of leakage while also increasing safety, as gaskets pose risks due to their varying degrees of stability. It also eliminates the need to select a suitable gasket material, especially for mixtures. Since the outlet valve cannot be removed and replaced, the original SCHÜTZ quality is protected.

An earthed version of the valve is available for use in EX zones: a wire connected to the valve forms a contact between an earthing plate at the outlet and the base plate. This neutralises any potential electrostatic charges. As part of our continuously ongoing IBC innovation programme, we have also

A wire connected to the valve forms a contact between an earthing plate at the outlet and the base plate.

They are firmly welded to the inner bottle and not, as is usually the case, just screwed on.



optimised the earthing cable in all our EX fittings. We are replacing the original copper cable with an injection-moulded cable made of plastic, which we produce in our own factory. This increases supply security, as it makes us independent of assemblers and suppliers. Of course, the new earthing cables also meet the requirements of the relevant regulations for the production of explosion-protected IBCs (IEC TS 60079-31-1:2013 and TRGS 727:2016).

Globally uniform standard

Uniform standards are the basis for consistent quality. That is why we are converting all white plugs for IBCs and drums to natural-coloured ones worldwide. Customers from the sensitive food, pharmaceutical and electrochemical industries in particular prefer plugs without masterbatches



(plastic additives in the form of colour granules) because they do not contain colour pigments which could interfere with the purity of the filling product. They are also ideal for our F1 and S-DS1 drums, which we equip with a natural-coloured inner layer on request. This inner layer is made of the same natural, high-quality HDPE material as the IBC inner bottles. The basis for this development is our Security-Layer Technology, where several layers are extruded simultaneously. This also has environmental benefits: eliminating the use of white masterbatches means that the bungs are much easier to recycle.

Filling level at a glance

With all optimisations, the focus is always on easy handling. With our current project, we make it easier for our customers to check the IBC filling level by providing a transparent scale on the side of the inner bottle. This is particularly useful for containers that have a large label plate on the front. The new inner bottle is being rolled out successively as part of the regular maintenance of our extrusion blow moulding lines at all locations worldwide.

SCHÜTZ RECEIVES THE OPERATIONAL EXCELLENCE AWARD

Henkel Adhesive Technologies honours outstanding achievements along the value chain

For many years, Henkel Adhesive Technologies has presented this award in recognition of the close and successful cooperation with its suppliers along the various value chains. In 2021, the global market leader in adhesives presented the Supplier Award in the Delivery Performance category to our company.

“Especially in today’s volatile markets and the strong pressure we are currently seeing on global supply chains, our long-standing and close partnerships are crucial for our business. It is therefore even more important to recognise the commitment and performance of our suppliers,” says Jan-Dirk Auris, Executive Vice President Henkel Adhesive Technologies.

“Our partnership is characterised by closely aligned strategic priorities.”

SCHÜTZ has achieved excellent service levels with strong scores in delivery time and delivery quality. In addition, our company has demonstrated a strong commitment to building a world-class global packaging partnership that supports both market growth and improved sustainability goals. “Our partnership is characterised by closely aligned strategic priorities that help make our joint supply chains more agile and robust,” says Thomas Holenia, Corporate Vice President Purchasing at Henkel.



NEW HANDLING GUIDE

for the safe use of
SCHÜTZ PE drums

SCHÜTZ's PE drums are used all around the world for the storage and transport of hazardous and non-hazardous liquids and solids. For many companies, our tight-head and open-head drums are crucial systemic components in their supply chain. Knowing how to handle these PE drums safely along the entire process chain is therefore extremely important for users. In the day-to-day use of the packaging, it is easy for handling errors to creep in unintentionally, which can pose a threat to the safety of the entire process.



In order to prevent these typical routine errors from occurring, the SCHÜTZ Technical Customer Service team has compiled a new Handling Guide which contains detailed instructions on the safe handling of PE drums. In this issue of SCHÜTZ News we provide an overview of the contents.

The Handling Guide is intended as an aid for users and it provides important information about drum filling, transport, storage and emptying. The guide consists of seven chapters and 73 pages, which describe all relevant process steps for specific products and applications. We recommend that even experienced users of PE drums consult the guide from time to time. The practical and safety-relevant tips and tricks, which are based on decades of application knowledge, will help you to use this type of industrial packaging safely and efficiently.



Selecting a suitable container

The responsibility for the choice of the suitable packaging lies solely with the filler. In this context the Handling Guide starts by providing some basic technical information about PE drums, the different designs and components. SCHÜTZ manufactures tight-head and open-head drums that are made of extrusion-blown, high-molecular polyethylene; our drums are characterised by their high dimensional accuracy and outstanding performance. For particular applications, SCHÜTZ manufactures special versions of its PE drums to meet specific requirements. These include the drums and components from the FOODCERT range for the food industry, which are marked with a special embossed logo. The guide also explains how to handle the "AUTOMATIC LOCK" bung closure system with a tamper-evident seal. This special bung cannot be opened without breaking the seal cap, thus providing optimum protection

for the contents from tampering or contamination. During filling, transport or storage, temperature and pressure variations can occur, causing the drums to become deformed. To prevent this damage, the SCHÜTZ Handling Guide explains how to use specific ventilation systems.

The drums and components from the FOODCERT range for the food industry are marked with a special embossed logo.



Ideal protection against contamination with AUTOMATIC LOCK.



Filling instructions

After selecting the right PE drum for the respective application, the next step is filling. Here, there are numerous aspects that have to be taken into account, from the filling level to the filling temperature and ventilation. The maximum filling level is determined according to the boiling point or density of the filling product. To avoid the drum warping during hot filling, for example, the filling temperature must not exceed 70 °C. The drums may only be stacked after they have cooled down to ambient temperature. Adequate ventilation must be ensured during the cooling process.

Storage and transport

The Handling Guide also provides answers to many recurring questions about the storage and transport of PE drums. As well as explaining the effect that temperature can have during storage, the manual also provides general guidelines for stacking. The difference between static and dynamic stacking loads is explained, as is how to achieve an even weight distribution during storage by inserting a pallet between the drums. The filling levels of the drums must also be taken into account when stacking. Furthermore, the guide also addresses and explains the correct use of drum grippers.



Emptying

Before emptying the drums, it should be ensured that they are standing on a level surface that is free of foreign objects and that they are secured against toppling. As PE drums do not usually have a bottom outlet, they can only be emptied through the filling opening. This can be done either by removal with suitable tools in the case of solids, or by pouring if the contents are liquid. In addition, the drum can be equipped with a discharge system for safe and clean emptying, for instance SCHÜTZ's dry coupling in combination with the Dip Tube mechanism.

Chemical resistance and design-type tests

The filler is responsible for ensuring that hazardous goods are approved and authorised for transport with the packaging, and must also ensure that they do not select packaging without first checking that the contents are compatible with the selected packaging material and the associated components. Our Technical Customer Service offers technical support and advice based on an extensive database with knowledge and experience gained from thousands of applications. All drums intended for the transport of dangerous goods must meet strict quality criteria for UN approval and must prove their suitability by passing various design-type tests. The Handling Guide presents the corresponding tests as well as the criteria required to pass them.

All drums intended for the transport of dangerous goods must meet strict quality criteria for UN approval.

Using drums in EX zones

Plastic packaging can become electrostatically charged when filled rapidly or during cleaning, mixing and stirring processes. To prevent this happening, the use of explosion-proof drums is mandatory in applications with highly flammable filling goods and in EX zones. The Handling Guide presents the various SCHÜTZ drum types designed for use in these areas.



GET YOUR COPY NOW:

New Handling Guide for SCHÜTZ PE Drums

The new Handling Guide for SCHÜTZ PE drums is available now from our Technical Customer Service. The team will also be happy to help you with any other technical questions you may have about the use of our products. We also have a Handling Guide for IBCs, which you can order by writing to: tcs@schuetz.net

Cool headed at the terminal

Cologne / Bonn airport is one of the most important commercial airports in Germany. Since the transfer corridor in between Terminals 1 and 2 heats up quickly, due to its glass façade and the intermittently high volume of passengers during boarding, it is necessary to control the room climate accordingly. The solution: In eleven sensor-controlled zones, our AIRCONOMY® system ensures a permanent supply of fresh air and an optimal climate.

A pleasant start to your vacation or your next business trip – Cologne / Bonn Airport makes it possible. It is considered to be one of the best airports in Europe and has been awarded 1st prize several times in the “Best Regional Airport Europe” category at the Skytrax World Airport Awards in London.

To make travelling as uncomplicated as possible, a new transfer corridor between Terminals 1 and 2 was built in 2019. This ensures that the passengers travelling within the Schengen area can move freely between the terminals, without having to go



Image source: Köln/Bonn Airport

ENERGY SYSTEMS

The glass façade of the transfer corridor heats up quickly. The needs-based control of the room climate is provided by our AIRCONOMY® system.



Image source: aquatherm GmbH

The new corridor allows passengers to transfer between Terminal 1 and 2 without having to go through another security check.



Image source: Köln/Bonn Airport



through another security check. Cologne / Bonn airport invested around 10 million Euro in this project. The 184 m long and 4,5 m wide transfer corridor is equipped with two boarding zones, one at the beginning and one in the middle of the corridor. Passengers can board the plane directly from these zones. The connecting building was designed by K6Architekten and the engineering firm Etgenium. The architectural design of the new building was based on the existing airport buildings. Passengers have a view of the runways through the large glass walls of the transfer corridor.

The structural conditions, as well as the intermittently high volume of passengers in the transfer corridor presented the operator with two challenges: On the one hand, the glass façade heats up quickly, on the other hand, the amount of people in the boarding zones varies, depending on the time of day. It was therefore necessary to control the room climate accordingly. Cologne / Bonn airport decided in favour of our AIRCONOMY® system. The multifunctional system combines a hot water underfloor heating with a controlled ventilation with heat recovery and an integrated cooling function. "By optimally combining the heating and ventilation

"By optimally combining the heating and ventilation functions in one system, AIRCONOMY® saves time and money as opposed to the combination of individual solutions."



The AIRCONOMY® system modules in the transfer corridor can be individually controlled via CO₂ and temperature sensors.



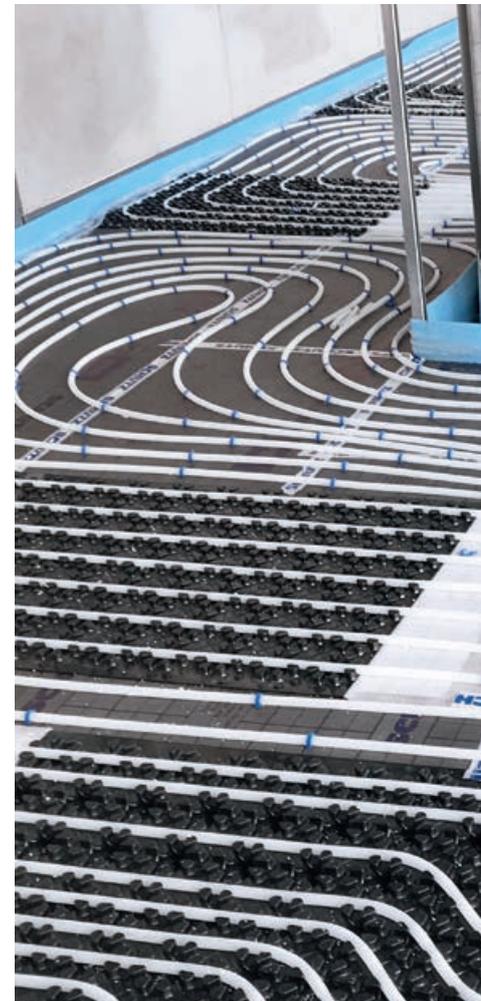
Specialist planner Thomas Runkel (right) and AIRCONOMY® project manager Qamil Hasaj (left) discuss the optimal placement of the system modules.

functions in one system, AIRCONOMY® saves time and money as opposed to the combination of individual solutions,” explains project manager Qamil Hasaj.

The energy-saving multifunctional system for heating, ventilation, and cooling was installed on an area of approx. 800m² by the company – Dr. Starck from Siegburg. The entire technology disappears into the floor structure – a traffic load of 5.0kN/m² therefore, had to be taken into account during planning. The heart of the system is the AIRCONOMY® system module, a double-layered, antistatic sheet made of plastic film, which is used as a hollow formwork with additional

thermal insulation laid on the unfinished floor. The heating pipes of the hot water underfloor heating system are fixed on the upper side, using the cams on the system element. Underneath, in the second layer, there is a 2 cm cavity for air circulation, which is connected to a ventilation unit with heat recovery via a floor duct system. In the case of the transfer corridor, there was no space for an overly large ventilation unit. Therefore, the decision was made to use a compact, high-performance unit with a cross-flow heat exchanger. As the air flows through the cavity floor, the supply air can be heated or cooled by the underfloor heating system, depending on the needs. Through outlet

“At peak temperatures of 34 degrees, the interior of the transfer corridor maintained a comfortable temperature thanks to the integrated cooling system.”



modules in front of the window surfaces fresh air enters the transfer corridor. A filter ensures that pollen and dust do not enter the building in the process.

The two boarding zones placed particularly high demands on the optimum room climate. "Many people come together here at regular intervals. Accordingly, the CO₂ concentration and heat emission is also high," says planner Thomas Runkel from the engineering firm Etgenium. Therefore, an increased number of AIRCONOMY® system modules were installed in the boarding zones. But how does the needs-based control of the individual, differently frequented sections of the transfer corridor work? For this, specialist planner Mr. Runkel divided the connecting building into eleven zones: "Each zone is controlled by a CO₂ and temperature sensor. The sensors decide how much fresh air is supplied." Connected to a circulation pump, the zones heat and cool as needed. This way, the temperature control can quickly be adjusted to the number of people.

In hot temperatures, AIRCONOMY® passes cooled water through the pipe registers in the floor. According to the principle of silent passive cooling, the heat is dissipated through the floor. A cooling load of 95 kW, however, was not sufficient for this building project. "The transfer corridor has many window areas through which it heats up quickly in warm outdoor temperatures and when solar radiation is high. Furthermore, there is no shade," explains Mr. Runkel. The optimal solution was a combination of AIRCONOMY® with another energy-saving ceiling surface cooling system, the aquatherm black system. This was installed in the perforated metal cassette ceiling and connected to an existing remote cooling network. The energy-efficient aquatherm black system releases the temperature of the water flowing through the black registers made of corrosion-resistant polypropylene through radiation. Drafts or dust swirls are excluded because of this process.

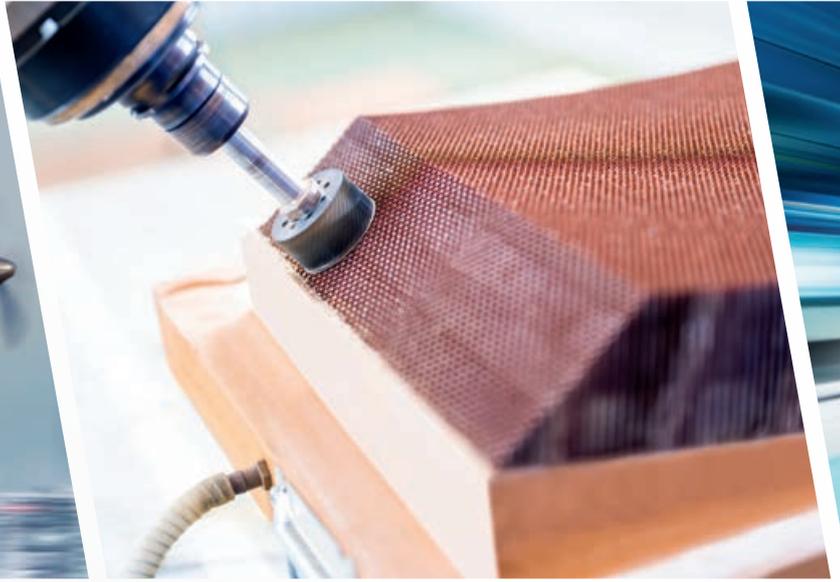
Specialist planner Mr. Runkel draws an overall positive conclusion: "Cologne / Bonn Airport is very satisfied with AIRCONOMY®. The system has been in operation since summer 2019, even before the Corona pandemic, and has endured the summer flight schedule. At peak temperatures of 34 degrees, the interior of the transfer corridor maintained a comfortable temperature thanks to the integrated cooling system." Through the needs-regulated air exchange, the virus concentration in the air can also be reduced and possible infections prevented.



Further information can be found at www.airconomy.net



The heating pipes are fixed via cams to the upper side of the black AIRCONOMY® system modules which have thermal and impact sound insulation.



RELOCATION COMPL

Production of CORMASTER® components now entirely in Siershahn

The component production of our high-tech lightweight material CORMASTER® was successfully relocated from Selters to Siershahn. The move has now been completed. The new competence centre at the Siershahn site raises the processing of honeycomb material and the production of our sandwich panels to an even higher manufacturing level. State-of-the-art workstations, optimised operating processes and digitalisation make this possible. Our customers in the COMPOSITES business segment will thus continue to benefit from products of the highest quality, tailored to their individual needs.

The base of the composite products are honeycombs made of aramid fibres; a material also used for bulletproof vests.



On land, on water or in the air – our high-tech lightweight material CORMASTER® can be used in many ways. The composite material is enormously resilient, extremely durable, heat-resistant and yet nevertheless a lightweight. These special attributes make it particularly attractive for vehicle and boat construction, as well as the aerospace industry.

The honeycomb blocks, produced at the headquarters in Selters, are now processed into



ETED:

structure and interior components of the highest quality at the new site for CORMASTER® components in Siershahn. The competence centre has been equipped with ultra-modern stations, the latest digital technology, as well as an optimal infrastructure. The ideal layout of all work areas along the production line ensures highly efficient operations. The product portfolio includes CNC milled honeycomb cores, sandwich panels, engineered panels, composite products manufactured in the autoclave, as well as master patterns and forms. The base of the composite products is honeycombs made of aramid fibres; a material also used for bulletproof vests.

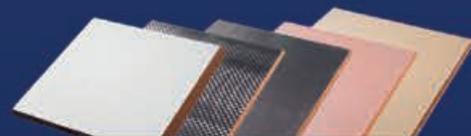
Absolute purity and laboratory-tested quality for demanding industries

An integral part of our component production in Siershahn is a new clean room with an area of 1,000 square metres. It complies with cleanliness class ISO 7, according to DIN EN ISO 14644-1 and has (partially) automated processing facilities (with CAD/CAM interface) for the application of core filler, as well as presses for the optimized production of complex composite components. The advanced equipment enables maximum air purity during the processing of sensitive materials,



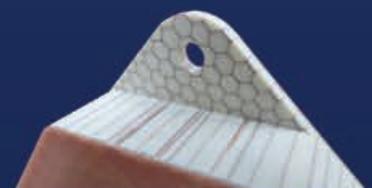
CNC-milled honeycomb cores

Modern 5-axis CNC milling machines bring the milled parts into the desired shape. The maximum dimensions are 2,200 mm x 6,500 mm x 1,140 mm. CNC-controlled machines ensure precise edges and drillings – even on curved surfaces.



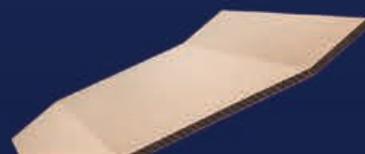
Sandwich panels

CORMASTER® is combined with pre-impregnated fabrics (prepregs) made of different materials, which are pressed together with the honeycomb core. This produces sandwich panels that meet even the highest requirements in the aviation industry.



Engineered panels

As a built-to-print provider, SCHÜTZ produces complete substructures from sandwich panels according to customer specifications. For this purpose, we have an extensive range of machinery: from an automated potting line to sandwich presses and CNC-controlled milling machines.



Autoclaved parts

A large-capacity autoclave with dimensions of 6,500 mm x 2,500 mm x 1,800 mm enables the production and curing of large, fibre-reinforced plastic structures. In the autoclave, process parameters of up to 10 bar pressure and temperatures of up to a maximum of 230 degrees can be generated. Additionally, the finished components can be subjected to negative pressure, to further enhance their quality.



The advanced equipment enables maximum air purity during the processing of sensitive materials such as prepregs, resins and potting mass.

such as prepregs, resins, and potting mass. We need these for the production of our sandwich panels, as well as during the coating of autoclave components. This is followed by the curing in multi-day presses and the discharge from the clean room. In the directly adjacent milling park, CNC-controlled machines give the sandwich panels their final geometries according to customer specifications.

An integral part of our component production in Siershahn is a new clean room with an area of 1,000 square metres.



The workstations for the assembly of our engineered panels are now also equipped with state-of-the-art technology. Through a monitor with SAP-access, employees are provided with digital construction documents from customers at all times. Compressed air and power supply from outside, the connection to a central dust extraction system, as well as short walking distances enable efficient work and create an ergonomic working environment.

Continuous monitoring in the integrated QA laboratory is essential for the high quality of our components. State-of-the-art equipment – such as a 3D measuring arm – and regular material tests ensure that our CORMASTER® components meet the high requirements of many original equipment manufacturers and aerospace suppliers.

The entirety of the optimized operating processes, as well as extensive digitalisation – from customer order to the goods dispatch – contribute to efficient order processing in the component production: Complex sandwich panels are manufactured quickly and flexibly according to individual construction plans. All of this in compliance with the highest quality standards – just as customers expect from SCHÜTZ.



The competence centre has been equipped with state-of-the-art workstations and the latest digital technology.

Further investments

at SCHÜTZ ELSA



SCHÜTZ stands for the uniform quality of its products and production processes worldwide. We support our locations from our headquarters and competence centre in Germany with ultra-modern facilities to ensure the expansion and continuous development of our subsidiaries.

As a licensee for the production and sales of IBCs and plastic drums, Envases y Laminados S.A. de C.V. (ELSA) has worked successfully with SCHÜTZ for more than 20 years. At the beginning of 2018, the company was fully integrated into our group of companies. It has since been part of the SCHÜTZ CONTAINER SYSTEMS Americas organization under the new name SCHÜTZ ELSA.



Continuous investments

The integration also went hand-in-hand with the start of an extensive investment programme: In 2019/2020, for example, the jerrycan production in Mexico was modernised and expanded in order to produce 20 litre jerrycans fully automatically and at the highest technical level, in the highest quality and a low weight. In addition, the capacities of the existing IBC production line were significantly expanded in the same year. Our customers in Central America benefit from the greatest possible security of supply.

Even in 2020, which was marked by the Corona pandemic, SCHÜTZ ELSA continued to invest in the expansion of production capacities. In addition to the installation of a new tube bending and pallet welding facility, the commissioning of a 3-layer blow moulding machine for IBCs was a milestone.



The new machine enables the production of the MX-EX IBC, which is designed for use in Ex-zones and further expands our product range.

The commissioning of the system took place under difficult conditions, as the specialists from the headquarters in Germany could not install the machine on site in Mexico, as is usual, due to travel restrictions. In an ambitious project, the employees involved developed a specialized remote program to carry out the setting-up, testing, and start of production, which all occurred within the planned schedule. In addition to classic video conferences, the most advanced virtual reality technology was also used. The local employees are equipped with special data glasses, so-called hololenses, with which they receive 3D information, instructions and handling aids for the

machines and tools in front of them. Specialists in Selters can thus provide concrete and quick assistance with the respective task, on site, and convey their knowledge and skills in a highly descriptive manner directly at the object. With the aid of the new technologies used, the SCHÜTZ ELSA team was able to familiarise itself quickly with the functions and capabilities of the new system and could commission the system independently. The valuable know-how gained in this project puts us in a position to make greater use of VR technology in the SCHÜTZ production network worldwide in the future, in order to avoid travel times and drastically reduce response times for technical support.

Further developments at SCHÜTZ ELSA also continued in 2021. The complete ERP integration into the SCHÜTZ network took place and with it a comprehensive harmonisation of all processes and standardisation of the master and material data. In order to continue the positive development of the SCHÜTZ site in Mexico in the future, further investments and capacity expansions have already been planned for our customers.

Reliable delivery for customers in the region

Today, SCHÜTZ CONTAINER SYSTEMS Americas has thirteen locations in North and Central America that use state-of-the-art and energy-efficient machines to manufacture IBCs, plastic jerrycans and drums, and fibre drums. With this close-knit network of production sites, we guarantee our customers in the region an exceptionally high security of supply, even in emergency situations.



About SCHÜTZ ELSA

Envases y Laminados S.A. de C.V. (ELSA) was founded in 1960 and has since been producing steel drums with a capacity of 38 to 208 litres as well as fibre drums, and a wide variety of plastic containers. ELSA has worked with SCHÜTZ as a licensee for the production and sales of IBCs and plastic drums since 1996. In the same year, ELSA was the first Mexican company to receive an ISO 9001 certification. This made the company a pioneer in the manufacture of industrial containers in Mexico. In 2012, the production of PE drums and IBCs was also certified in accordance with FSSC 22000. As a result, ELSA continuously developed new products, and today has the broadest range of industrial packaging in Mexico. The company operates five production facilities at three locations and, as SCHÜTZ ELSA, has been a fully owned subsidiary of SCHÜTZ since 2018.

1960

Founding of the company

Envases y Laminados S.A. de C.V. (ELSA)

1996

Licencee

for SCHÜTZ products

Certification

in accordance with ISO 9001

2012

Certification

the production of PE drums and IBCs in accordance with FSSC 22000

2018

SCHÜTZ ELSA

fully owned subsidiary

READY FOR THE FUTURE!?

“Welcome Days” for 42 SCHÜTZ apprentices and taking over of 37 young professionals



In 2020, the Corona pandemic led to an unprecedented decline in the number of new training contracts: minus 9.3 percent! According to the Federal Statistical Office this is the largest decline since these records began in 1977. Currently however, apprenticeship in Germany is picking up again: In June 2021, the Chamber of Industry and Commerce recorded 1.4 percent more new contracts than in the previous year. Around 750,000 young people are currently taking up apprenticeships in trade, services, and industry. SCHÜTZ also recorded an increase: 42 new apprentices – including five dual students – started their exciting working life with us on 1 August. They are all looking forward to the best career opportunities in a company that is constantly growing internationally.

A current total of 121 trainees and dual students, spanning across three training years, are doing their apprenticeship with us. The spectrum of the 22 different apprenticed professions and specializations ranges from plant mechanic to industrial clerk to technical product designer. Additionally, this year the already broad range of apprenticeships will be expanded to include metal technology, forming and wire technology specialists, as well as the three new dual study programmes in infotronics, information technology and digital media. We, as a globally active company, are thus consolidating our position as the largest trainer in the Westerwald region and at the same time securing our future. Qualified trainees from our own company strengthen the economic success and innovative power – around the globe.

Hello & welcome

We welcomed the 42 young professionals in our well-established manner at our “Welcome Days”. This introductory week gently prepares them for their new start and familiarises them with the company. In order to be able to comply with hygiene measures and distancing rules, the induction days were again moved from the administration building at our headquarters in Selters to the spacious SCHÜTZ sports hall this year. The entire company, especially the training managers Susanne Schneider and Sven Becker, are proud to have been able to recruit so many new apprentices in 2021,

despite the unusual circumstances during an ongoing pandemic.

Accordingly, the entire training team was very committed to giving all new starters a warm welcome. In addition to many small welcome gifts, the apprentices were delighted to receive a tablet provided by SCHÜTZ for the duration of their training. This means they are ideally equipped for the rapidly advancing digitalisation in the company itself, as well as in educational centres. Training content from the factory lessons and the accompanying vocational school can thus be ideally combined.



The apprentices were delighted to receive a tablet provided by SCHÜTZ for the duration of their training.

Start with Infotainment

The "Welcome Days", which took place during the entire first week of August, offered a varied program: In addition to the obligatory first aid course and fire safety training, the agenda included various lectures and a company presentation. This also included a clear introduction to our extensive product range. Accompanying get-to-know-you and team-building games meant that the fun part didn't fall short.

Additionally, there was also an extensive introduction of the trainers. After all, in the future they will be the direct contact persons for the apprentices and will often become trusted reference persons over the course of the training period. With a total of 20 trainers, 60 training officers and two full-time trainers in the training centre, SCHÜTZ is very well set up as a training company. They all accompany the young people on their way, impart know-how and expertise, for a successful professional career.



In addition to the headquarters in Selters, the new apprentices also visited our other nearby sites in the Westerwald region. Buses – displaying training advertisements in SCHÜTZ design – took them to the two factory sites in Ransbach-Baumbach and Siershahn. There, the newcomers gained further insights – especially into product-specific manufacturing processes.

All graduates of the 2021 summer exams in the technical, skilled trades, and commercial professions have been taken on!

Congratulations

A reflection of the career prospects at SCHÜTZ is shown by our 37 former apprentices: All graduates of the 2021 summer exams in the technical, skilled trades, and commercial professions have been taken on! They will remain with us as highly motivated new colleagues. Especially gratifying: Six of them achieved the overall grade "very good" for their graduation. **We congratulate all of them and warmly welcome them to our international SCHÜTZ family!**

Interview:

Paul Liekenbröcker,
 student at SCHÜTZ
*Bachelor of Engineering,
 Electrical – Infotronics*



This year, among other things, we added the dual study program “Bachelor of Engineering, Electrical – Infotronics” to our training portfolio. We spoke to our first dual student in this field, Paul Liekenbröcker. The 19-year-old from Koblenz tells us why he chose this field of study and why SCHÜTZ was his first choice as a training company:

What influenced the choice of your apprenticeship / dual study program?

I had my first contact with electrical engineering at school, which made it clear relatively quickly, that I wanted to study something in this direction. In the end, I decided on Infotronics, in my eyes, a very future-oriented course of study. The combination of electrical engineering and computer science initially sparked my interest and then later also convinced me.

What are your hobbies? Is there a connection to your interest in electrical engineering or infotronics?

Not really... In my spare time, I play the trumpet and I am actively involved in youth work. You can't really talk about a direct connection to infotronics in that regard. But perhaps it is exactly these contrasts that increase the appeal of the degree program I have chosen.

Where do you see the advantages for your later professional life in this line of work?

I would say the biggest advantage is that the course of studies doesn't just focus on electrical engineering or computer science, but combines both. This opens up a lot of opportunities for me that would not be possible with normal studies in just one of the two fields. For me personally, the fact that both computer science and electrical engineering expertise is taught played a particularly important role.



How did you find out about SCHÜTZ as a training company? Why did the company convince you?

I found out about SCHÜTZ because several people around me told me that the training there was very good. I then took a look at the homepage, got a first impression of the company and checked whether a dual study program in electrical engineering was also offered. However, I was convinced by the opportunity to study at an international company with multiple interesting divisions. I hope to gain many different insights and increase the variety and diversity during my studies.

Thank you very much, Mr. Liekenbröcker, for the interview! We at SCHÜTZ look forward to lively professional exchanges with our dual students. At the same time, we are interested to see what new and exciting apprenticeships will develop from the technology of the future.



Studying with SCHÜTZ:

Bachelor of Engineering, Electrical – Infotronics

The dual study program “Bachelor of Engineering, Electrical – Infotronics” lasts three years. The theoretical part is taught at the Baden-Württemberg Cooperative State University. The practical training units take place at our company.

Infotronics combines know-how in electrical engineering with IT expertise. It combines electrical engineering from the automation field of study with content from information and communication technology, computer science and business informatics. Hardware meets software – people become part of the information flow. Our world is becoming smarter and smarter! This is not only changing everyday private life, but also our future professional life. The digitalisation and networking of various disciplines is becoming increasingly important in this context. The study model is the answer to requirements

for Industry 4.0, Internet of Things (IoT), Data Science and Artificial Intelligence (AI). In order to help shape these technological and societal trends, professionals with an interdisciplinary understanding of comprehensive information management are in demand. One of their central tasks: Driving technological progress within the company.

My future starts here:
www.schuetz.net/ausbildung

Image source: Ars Electronica

MX 560

as part of an art project

“There is no Planet B”: The exhibition at the Ars Electronic Center in Linz (Austria), which opened at the beginning of September, focuses on climate change and how humans influence it. The artworks presented are intended to open people’s eyes to the current situation and, together with graphs and explanatory videos, encourage them to engage with the topic.

Image source:
Ars Electronica

Among the exhibitors in Linz are the artist duo Nicolas Maigret and Maria Roszkowska from DISNOVATION.ORG, who will be presenting their project “Life Support System”.

The installation shows a square metre of wheat artificially grown in a closed environment. All inputs, such as water, light, heat and nutrients, are constantly monitored, measured and displayed for the visitors to see. This square metre of wheat is sufficient to meet the daily calorie needs of an adult every four months. To meet the complete needs of an adult for a whole year would require the simultaneous operation of around 100 of these units.

The art project shows the enormous effort that is required to cover nutrition needs in a closed or artificial environment, as opposed to traditional agriculture. The “Life Support System” shows just how critical the contribution of the ecosystem is and helps to quantify the undervalued “work of the biosphere”.

When designing the artwork, the two artists came across our ECOBULK MX 560, which fits the installation perfectly in terms of dimensions and filling volume, and additionally serves as a water source. In this art project, the MX 560 illustrates the amount of water needed for a wheat harvest within this specific installation.



Merry Christmas

Advanced technologies and continuous development have always characterised our products – because the world is also constantly changing. Change has also come to our newsletter, which now features a new, more modern design. This issue of SCHÜTZ News marks the end of the 2021 newsletter season, but you can look forward to many interesting and exciting topics from the world of SCHÜTZ in the coming year.

As the year draws to a close, we would like to thank you very much for your interest and loyalty, and for your praise and constructive criticism.

We wish all our customers, partners, colleagues and their families a Merry Christmas and a very happy, healthy and prosperous New Year!

The SCHÜTZ News Team