

**SCHÜTZ**

# news



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to sustainable energy

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**To whirl is not enough:**  
How the SCHÜTZ IMPELLER  
protects filling product  
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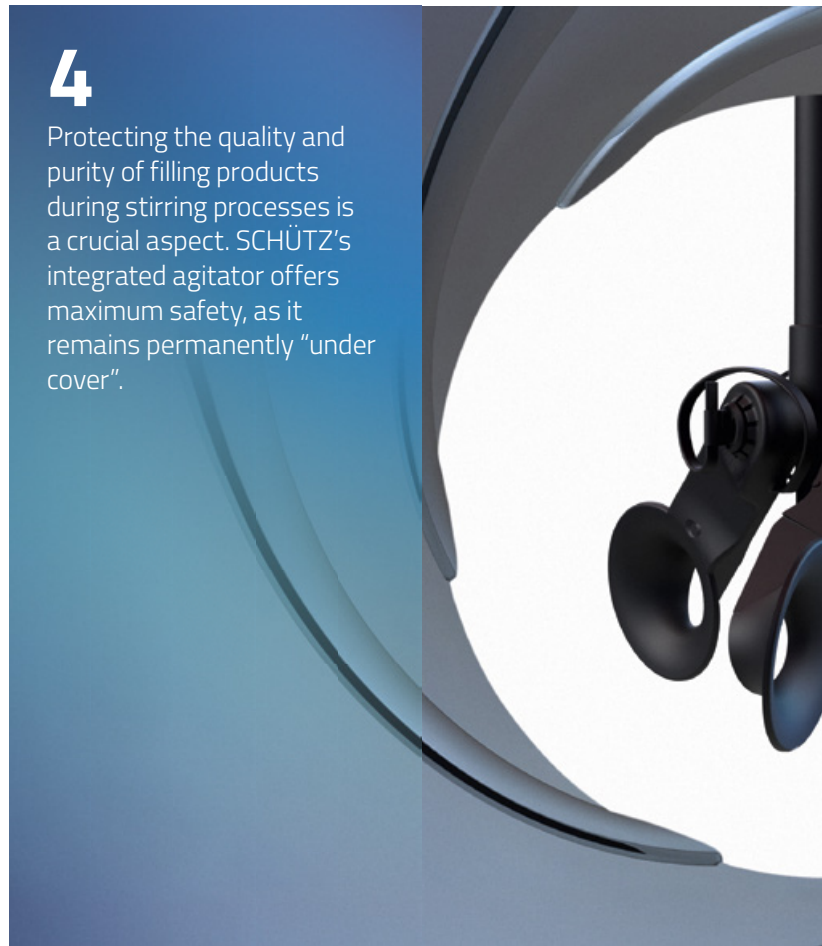
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Protecting the quality and purity of filling products during stirring processes is a crucial aspect. SCHÜTZ's integrated agitator offers maximum safety, as it remains permanently "under cover".



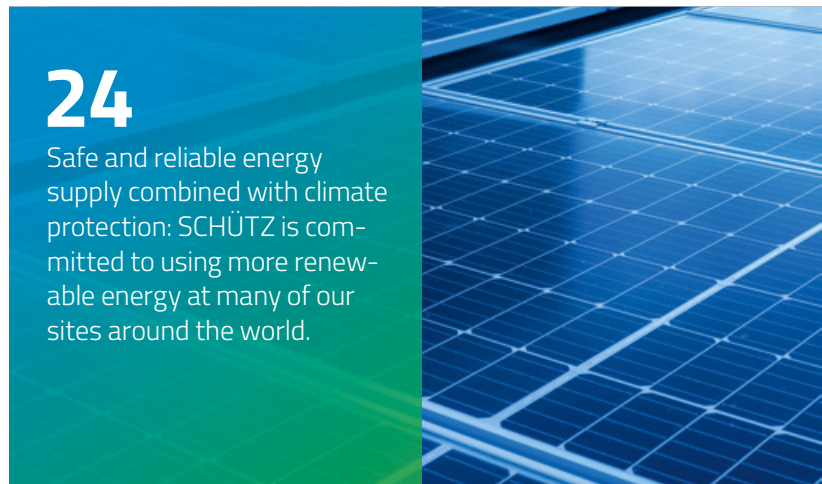
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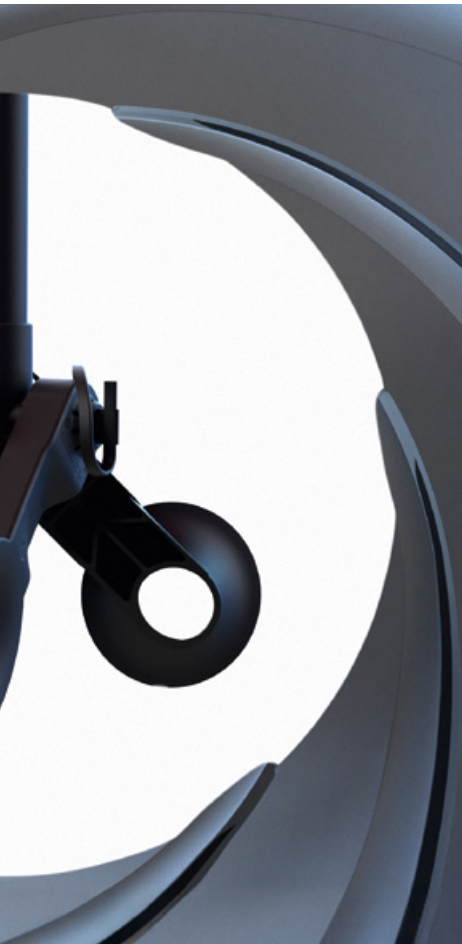
We're future-proof for alternative liquid fuels – our storage tanks now have the "Green Fuels Ready" label.



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## IMPRINT

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# To whirl is not enough:

How the SCHÜTZ IMPELLER protects filling product quality

Shaken – not stirred. For over 60 years, secret agent James Bond has been voicing this preference in chic bars and restaurants all around the world. Unlike a vodka martini, there is often no alternative to “whirling” for viscous liquids such as coatings and adhesives. In order to protect the quality and purity of the product during stirring, there are several factors that need to be taken into account, particularly when conventional agitators are being used. In contrast, SCHÜTZ’s integrated agitator offers the highest safety as it always stays “under cover”.





In many sectors and applications, products transported in IBCs must first be stirred and homogenised before they can be processed. This often applies to paints and varnishes, sealants and adhesives or certain chemicals with a higher viscosity. Stainless steel agitators are generally used for this purpose, and they have to be cleaned after use in preparation for the next application. This effort would

be negligible if these stirring processes did not pose significant quality risks, often resulting in substantial downstream costs to maintain quality. In the automotive industry, for example, even the slightest contamination can lead to defects and pitting that become visible after the body has been painted, meaning the entire component is not suitable for use.



To enable safe and efficient agitating processes inside the IBC, SCHÜTZ has developed a revolutionary, self-contained concept: the IMPELLER.



**SCHÜTZ's solution is the ECOBULK with an integrated IMPELLER, which completely eliminates the risks associated with traditional stainless steel agitators:**

**OPENING:**

The IBC must be opened to insert the agitator. The screw cap of the filling opening is completely removed and the filling product is exposed to the surroundings with all associated contamination risks.

**FOREIGN BODIES:**

The inserted reusable metal agitator poses a risk of contamination in itself, as residues from previous uses and cleaning agents are difficult to avoid.

**REMOVAL:**

During removal, residues of the filling product still adhere to the agitator. This means product loss, it jeopardises the cleanliness of the packaging and the working environment and, depending on the ingredients, can pose a health hazard for employees.





# A license to stir

**T**o enable safe and efficient stirring processes inside the IBC, SCHÜTZ has developed a revolutionary, self-contained concept: the IMPELLER. The disposable agitator is inserted into the container at the factory; it is made of HDPE, the same chemical-resistant material as our IBC inner bottles, and is firmly integrated into the screw cap of the filling opening. With the appropriate process and container configuration, the SCHÜTZ IMPELLER does not need to be removed during the filling process, meaning that the ECOBULK remains permanently closed throughout the entire supply chain until the filling product is removed –

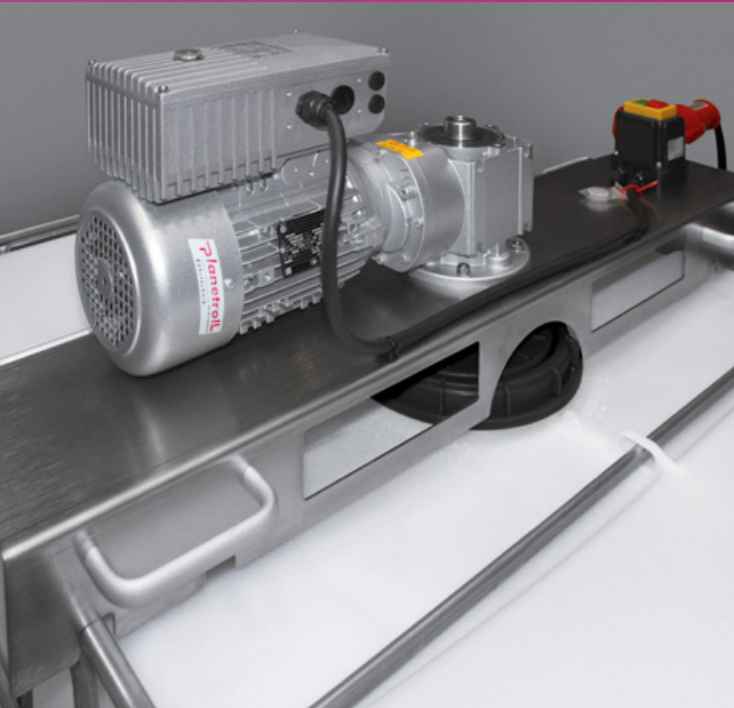
even during stirring processes. This completely eliminates the risk of contamination that could result from opening the packaging and inserting an external agitator. The IMPELLER is available for all ECOBULK sizes from 560 to 1,250 litres. Thanks to its conductive design, it is also suitable for use in EX zones and with flammable filling products with a flash point  $\leq 60$  °C.

## Best stirring results

The IMPELLER has a special bucket agitator with movable wings that open up automatically as the speed increases. This agitator homogenises filling products



gently and without bubbles forming; any sediments are completely dissolved, reducing the loss of filling product to a minimum. The IBC can be almost fully emptied. Depending on the filling product, the IMPELLER should be operated at low speeds of up to 200 rpm in order to homogenise the filling product gently and avoid air entrainment, bubbles and foaming. The IMPELLER opens at low speeds of 60 to 80 rpm depending on the product. The maximum speed is 350 rpm; this speed and a maximum torque of 100 Nm should not be exceeded.



### Suitable for use with standard drives

As a rule, the SCHÜTZ IMPELLER can be connected to almost any standard traverse or gantry-mounted agitator drive, meaning that existing drive systems can usually be used without any problems. The connection is made via a steel shaft that is inserted into the hollow shaft of the IMPELLER. This steel shaft forms a connection with the hub. **After the stirring process, the steel shaft can be easily removed. As it has had no contact with the filling product, it can be used immediately with the next IMPELLER without requiring cleaning.**

Depending on the filling product, the IMPELLER should be operated at low speeds of up to 200 rpm in order to homogenise the filling product gently and avoid air entrainment, bubbles and foaming.



### Filling IBCs with an IMPELLER

There are different options for filling:



If the IBC only has one central filling opening, the screw cap with the integrated IMPELLER must be loosened and pushed to the side.



Filling is safer and more convenient if the IBC has an additional bung in the top. The IMPELLER remains where it is without being handled and filling can be carried out conveniently, ideally from below the surface to prevent foaming and the risk of brush discharge with flammable filling products. The additional opening also makes it easy to take samples or add ingredients.



Scan the QR code for our  
IMPELLER video guide.

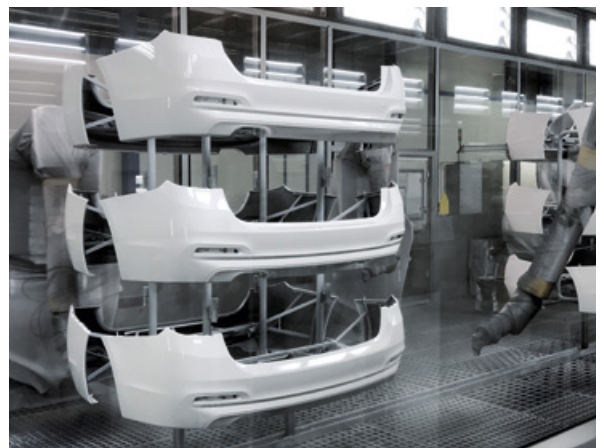
### Stirring with the IMPELLER, step by step

1. To insert the steel shaft, first remove the sealing cap, then unscrew and remove the plug and remove the Alveolit seal.
2. Insert the steel shaft, turn it until you feel it engage and push it in as far as it will go.
3. To connect the IMPELLER, lift the steel shaft slightly and connect it securely to the relevant connection on the drive system. The IMPELLER now hangs freely in the screw cap. To avoid plastic abrasion that could be caused by contact, ensure that it does not rest on the bottom or touch the sides or bottom.
4. Set the outer conductor/phase of the drive to clockwise rotation.
5. As soon as the wings of the IMPELLER are fully immersed in the filling product, the stirring process can be started. To do this, switch on the drive at a low speed and slowly increase it.
6. The stirring process begins. Sediments are churned up completely, even in the corners of the IBC. Gentle undulating movements on the surface of the product up to the side walls indicate an optimum homogenisation process.

### Mission: automotive industry

The highly sensitive high-tech coatings used in the automotive industry measure just a tenth of a millimetre when applied. Contamination with surface-active substances such as oils or fats containing silicone can lead to wetting problems, which can impair both the appearance and the protective effect of the coating. Viscous coatings require stirring in the IBC, but this can pose a high risk as every time the packaging is opened and any contact with other equipment can lead to unwanted contamination. Even the insertion of the agitator can present a contamination hazard. Suppliers in the automotive industry usually meet this challenge with complex and expensive downstream processes. With the IMPELLER, the risk of contamination during the filling and processing of clear coats and primers can be minimised and the efficiency of the process significantly increased.

**The result of a comparative test performed by a user showed that with external stainless steel agitators, 140 to 200 revolutions per minute were required for homogenisation. This high speed led to increased microfoam formation due to air being drawn into the product. In contrast, 80 to 110 revolutions were sufficient when stirring with the IMPELLER.** Thanks to the much gentler stirring, the process quality was significantly improved. As homogenisation also took considerably less time, the container could be connected directly to the production line for paint feeding after installing the drive. This eliminated an additional, previously necessary work step at a preparation station.





### Mission: agriculture

In agriculture it is important that seeds are treated prior to use. A method that has been used since ancient times is dressing, now also called seed treatment: a special dressing is applied directly to the seed; its purpose is to facilitate mechanical processing and protect against fungal attack and pests. However, the seed dressing agent may settle if it is left to stand for prolonged periods. This means that the agent needs to be mixed and homogenised before processing, which is a time-consuming and potentially risky process. Until now, special pumps were used for this purpose. The packaging always had to be opened and the pump inserted. This made it almost impossible to avoid the exterior of the container becoming soiled and presented the risk

for operators of direct contact with the treatment fluid. Using the IMPELLER for the stirring process in the IBC significantly simplifies the handling of the dressing agent. **A visual inspection in a practical test showed how the dressing was stirred completely homogeneously without any foaming. After stirring with the integrated IMPELLER, all heavy sediments had been dispersed.** In addition, the closed system virtually eliminates the risk of the user or the outside of the packaging coming into contact with the dressing agent. The IMPELLER thus contributes to greater safety and cleanliness in this application.



## An overview of the IMPELLER

Full solution for all filling products that need to be stirred or homogenised in the supply chain

The system, consisting of ECOBULK and integrated IMPELLER, remains closed and sealed from filling to removal, even during stirring processes

Contamination risks are eliminated, and costs significantly reduced compared to reusable containers and external stainless steel agitators

The components that come into contact with the filling product are free from silicones





### Mission: paints and coatings

Paints and coatings are highly viscous products **which require packaging that fulfils very high standards in the supply chain, requirements that go far beyond just good residual drainability.** Often, these products need to be stirred in order to ensure easy discharge and optimum processability.

This step can present a significant contamination risk: the packaging may have to be opened several times and agitators have to be inserted and removed again, often multiple times. As a result, unwanted foreign particles can be introduced into the product, for example due to inadequate cleaning or overlooked product residues. This quickly compromises the subsequent application. With the IMPELLER, these risks can be eliminated as it can be used without opening the IBC. The stirring result is highly impressive, as was demonstrated in a practical test. One user filled a SCHÜTZ HX container two-thirds full with a total of 650 kilograms of varnish, a highly viscous and quick-drying protective coating based on linseed oil. The IMPELLER was used to stir the very viscous medium after two and a half days of storage. For the entire quantity of 650 kilograms, it only took around 35 minutes at an energy input of 1.8 KW at 200 revolutions per minute to stir through the contents.


No time-consuming or potentially hazardous cleaning required before the next use

No product contact means: clean hands, clean container, clean working environment and optimum employee protection

Excellent stirring results: the filling products are homogenised gently and without foaming, sediments are completely dissolved

Environmentally-friendly reconditioning of the used ECOBULK with IMPELLER through the SCHÜTZ TICKET SERVICE





Laser-welded steel  
meets high-quality plastic:

# THE NEW SCHÜTZ COMBI LASER DRUM

The idea of combining steel and plastic and benefiting from the properties of both materials lies at the core of the SCHÜTZ IBC system, and we have also been pursuing it for our steel tight-head drums. From autumn 2024, our main plant in Selters will start production of an advanced drum version: the new Combi Laser Drum, which fuses the unique quality of our fully galvanised laser drums with the advantages of a HDPE inner liner.

**A**s a rule, SCHÜTZ Combi Drums combine the corrosion resistance and cleanliness of a plastic drum with the stability and permeation protection of a steel drum. **To achieve this, a conventional steel drum is fitted with a special HDPE inner liner in an additional production step at our Spanish site. To seal the space between the inner plastic liner and the outer steel drum, an additional circular seal is inserted in the bung area.** As a result, a Combi Drum

offers double leakage protection as well as being suitable for chemicals that are otherwise incompatible with untreated steel or the standard internal coatings of steel drums. This applies, for example, to particularly challenging products from packaging group I that have highly permeable, aggressive and corrosive properties.

### Based on the SCHÜTZ Laser Drum

The new SCHÜTZ Combi Laser Drum (CLF) combines this principle with our revolutionary process for steel drum production, which is based on high-precision laser welding. We process hot-dip galvanised sheet steel directly from the coil. The base material has a continuous and evenly distributed zinc coating and therefore offers maximum corrosion protection right from the start, without the need for downstream galvanising or coating. The elimination of these production steps significantly improves manufacturing efficiency and the environmental footprint.

As a result, a Combi Drum offers double leakage protection as well as being suitable for chemicals that are otherwise incompatible with untreated steel or the standard internal coatings of steel drums.



The drum shell is manufactured using a specially developed laser welding process where the sheet metal is butt-welded together.



Thanks to the excellent protection of the contents and the high durability, the SCHÜTZ Laser Drum has already firmly established itself as an innovative product in the steel drum sector.

### Production of the SCHÜTZ Combi Laser Drum to start this year

Inserting an inner container made of high-purity HDPE into this fully galvanised laser steel drum results in a SCHÜTZ Combi Laser Drum that perfectly combines the specific strengths of the two individual components. The intelligent combination of steel and plastic provides comprehensive and reliable protection for even the most demanding products. **Production of the SCHÜTZ Combi Drum in Selters is due to start in autumn 2024 with both conventional coated standard steel drums and the new fully galvanised laser drums. Customers can choose between a 205-litre version with a 3 kg inner container or a 202-litre version with a 6 kg plastic liner, and combinations of different sheet thickness will be available.** On request, customised branding can be screen printed on the drums.

It also eliminates quality risks and further improves the general cleanliness of the packaging. For example, there is no risk of paint drips, inclusions, pitting or residues. This exceptional quality also applies to the welding technology. The drum shell is manufactured using a specially developed laser welding process where the sheet metal is butt-welded together. The result is a high-quality, smooth and clean weld seam between 2 and 3 mm wide.

On request, customised branding can be screen printed on the drums.



# 1,111,111

## Special milestone at the Hamburg production site

There was cause for celebration at our Hamburg site recently, when the 1,111,111th SCHÜTZ IBC rolled off the production line!

This was a proud milestone for the entire team, and it was celebrated in style with a cake shaped like an IBC which was specially made for the occasion. SCHÜTZ not only delivers outstanding work, we also value team spirit and mutual appreciation.



## FAIRS



24 – 26 SEPTEMBER 2024  
MESSE NÜRNBERG  
HALL 6 | BOOTH 6-328

SCAN  
PACK®

22 – 25 OCTOBER 2024  
SVENSKA MÄSSAN  
GOTHENBURG  
HALL C | STAND C01:22



**Fit for the future: our tanks are ready for alternative liquid fuels**

SCHÜTZ tanks are

# “Green Fuels Ready”

Our storage tanks have been awarded the Green Fuels Ready label. Certified by the German Institute for Building Technology, our heating oil tanks are fully suitable for alternative fuels in accordance with DIN EN 15940 and DIN/TS 51603-8, making them a truly future-proof choice: Green Fuels are produced using renewable energies and produce significantly fewer harmful emissions than fossil fuels.

**T**he construction sector plays an important role in climate protection, as this area is responsible for around a quarter of all CO<sub>2</sub> emissions. In Germany, over five million oil-fired heating systems, mostly in detached and semi-detached houses, are still in use, providing the energy for a warm home. With a share of around 25%, oil remains in second place after gas as the primary energy source for heating in German homes. Heating oil systems that run on greenhouse gas-neutral fuels can make a decisive contribution on the road to a climate-neutral future – provided, of course, that the entire heating system, including the fuel storage tanks, is future-proof.

“The Green Fuel Ready label certifies the future security and quality of our heating oil tanks,” says Christian Schlosser, man-

aging director of SCHÜTZ ENERGY SYSTEMS. The label recognises heating systems, tanks and components that can be operated with greenhouse gas-neutral liquid fuels. Anyone wanting to ensure that their new system is a future-proof investment should therefore make sure that the products carry the new label. All current SCHÜTZ storage tanks are labelled with the Green Fuels Ready label. In addition to the plastic and steel TANK IN TANK, the range also includes the VET storage and disposal tanks as well as multi-tanks for the storage and disposal of diesel fuels and oils.

## **SCHÜTZ storage tanks**

Double-walled systems such as the TANK IN TANK plastic or



steel versions provide double protection with an inner tank and drip tray, meaning that safety measures such as a brick containment sump or even a separate heating oil storage room are no longer needed, which saves space. Awarded the Proofed Barrier® quality label and having passed the fire test (MPA) and with an SMP odour barrier, our tanks offer effective protection against oil odours and are suitable for space-saving installation in any living area, including those used for other purposes.



## What are Green Fuels?

**Green fuels are alternative liquid fuels that will in the long term be able to replace fossil heating oil.**

An important aspect in the development of these new fuels was their drop-in capability, which enables them to be added to heating oil in increasing proportions up to 100 per cent. Their use is considered CO<sub>2</sub>-neutral because the same amount of CO<sub>2</sub> is removed from the atmosphere during production as is later released during combustion. This means that no additional CO<sub>2</sub> is produced in the overall balance. Closed carbon cycles like these are created by using bio-based waste and residual materials in their production, for example. Another option is hydrogen derivatives, known as e-fuels. These are produced synthetically from green hydrogen, i.e. hydrogen generated using renewable electricity, and "recycled" CO<sub>2</sub>. As storable energy sources, green fuels will play an important role in the future energy mix in combination with fluctuating wind and solar power.

*Source: [www.zukunftsheizen.de](http://www.zukunftsheizen.de)*



For more information, visit [www.schuetz-energy.net](http://www.schuetz-energy.net)



Spotlight on our innovative  
honeycomb material

# SCHÜTZ at JEC WORLD 2024

The Leading International  
Composites Show

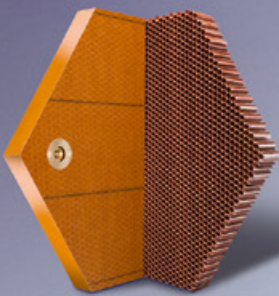
March 5-7, 2024 | PARIS-NORD  
VILLEPINTE

JEC World in Paris is the leading international trade fair for composites and their applications. In 2024, the JEC World Event set a new record by attracting more than 43,500 trade visitors from over 100 countries and 1,300 exhibitors. From 5 to 7 March, we were represented by SCHÜTZ COMPOSITES, which put our innovative lightweight construction material CORMASTER® in the spotlight at the show.

The honeycomb-shaped lightweight material based on aramid paper combines several advantages: it is resistant to extreme heat and moisture, and is corrosion-resistant to oils, water and paraffin. At the same time, it has a very low intrinsic weight combined with maximum stability and mechanical strength.

The honeycomb structure gives the material excellent shear properties, making it one of the best core materials available. Our honeycombs are also available in processed forms, including as sandwich, engineered sandwich or curved sandwich panels, as well as in customised geometries as milled or formed honeycombs.

This flexibility attracted interest from a wide range of industries and many visitors to our stand. For example, the modern material can be used in both aircraft and vehicle construction, including in high-quality interior parts such as floor panels, but also in load-bearing structural parts such as rotor blades. We used a practical example to illustrate just how versatile CORMASTER® is: the visual highlight of our booth was a sphere made from a honeycomb based on aramid paper (CORMASTER® C1-3,2-70). The honeycomb for the exhibit with a diameter of 900 mm and a weight of 27 kg was first manufactured by us in Selters and then perfectly milled to form a sphere by the components department of SCHÜTZ COMPOSITES in Siershahn. This exhibit demonstrated impressively that there are virtually no limits to the possibilities for milling honeycomb parts at SCHÜTZ.







### **Our CORMASTER® materials also offer users significant advantages in terms of sustainability.**

Our CORMASTER® materials also offer users significant advantages in terms of sustainability. The high-performance lightweight material with its incredible strength and low weight makes a direct contribution to reducing CO<sub>2</sub> emissions in aviation. In addition, we are constantly working on making our processes even more energy-efficient and reducing CO<sub>2</sub> emissions in the production of CORMASTER®, for example by increasing the use of solar and wind energy in production. The next step could be the use of alternative resin systems based on renewable raw materials for our honeycombs. Our sustainability measures in particular were very well received by visitors to the trade fair, and especially representatives of the aviation industry, which on the whole was optimistic and focussed on generating growth.

### **CORMASTER® expansion with new production lines**

At our stand we also presented the redundant CORMASTER® production line in the new 6,000-square-metre hall complex in Selters which recently started production. On these new machines we can now produce honeycomb blocks up to 2,700 x 3,600 mm in size in a highly automated process. All systems were planned by our SCHÜTZ engineers and largely manufactured in the company's in-house mechanical and plant engineering department. This approach enables us to guarantee uniform quality standards. As the production lines are redundant, we are also optimally protected in the event of potential repairs and breakdowns. This also gives us greater supply security, as the plants each have their own electricity, gas and thermal oil supplies. At the same time, modern exhaust air treatment systems ensure lower CO<sub>2</sub> emissions and lower overall pollutant emissions. With all of these changes, we have now raised the production of our CORMASTER® honeycombs to an even higher level.



50 YEARS OF EXPERTISE:

# SCHÜTZ'S IN-HOUSE BLOW-MOULDING LINE MANUFACTURING

When SCHÜTZ started manufacturing its first blow moulding line in-house in the 1970s, it was not yet possible to foresee what a crucial step this would be for the company's future success story. Today, our company is the technology and innovation leader in continuous extrusion blow moulding (CEBM) and has just finished a state-of-the-art CEBM system, which will be used in China to further strengthen our packaging production.

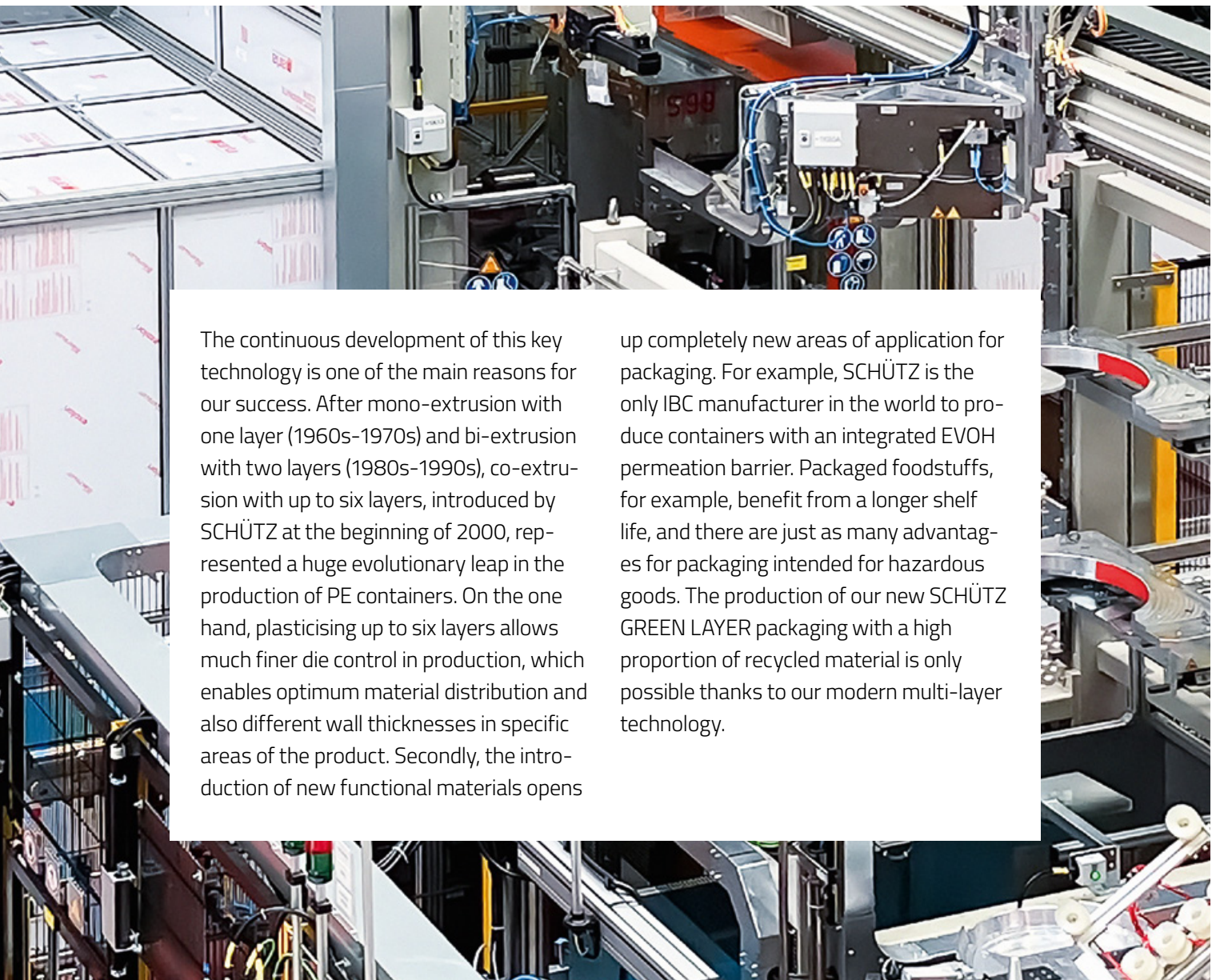
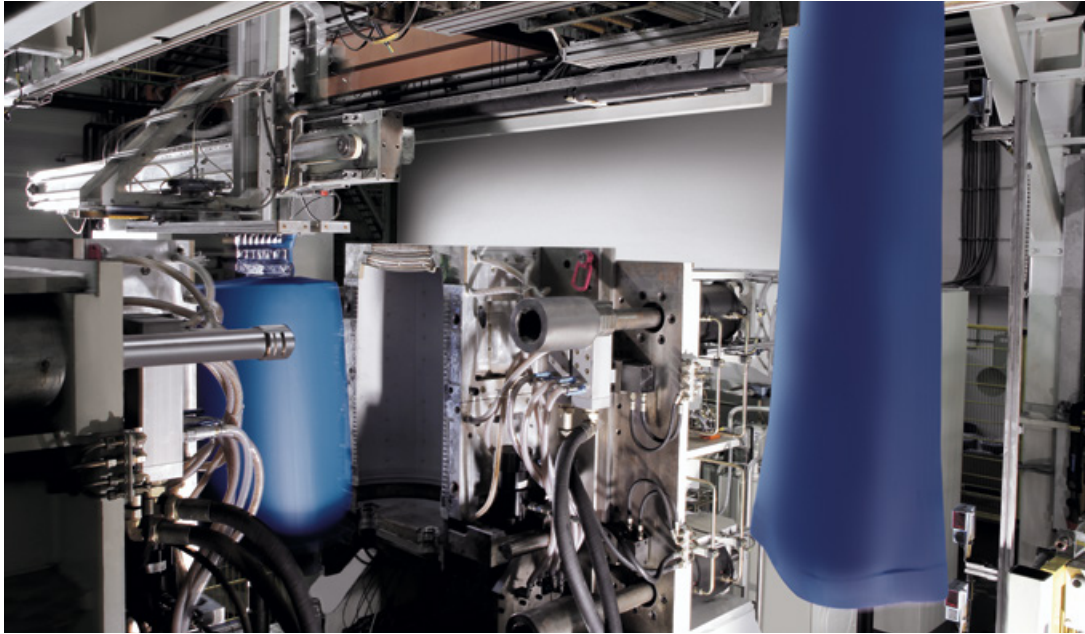




The in-house development, design and manufacture of almost all the tools, machines and systems we need to make our products is something we are proud of in the SCHÜTZ Group. The competence centre in Westerwald, with our headquarters in Selters and the Siershahn plant, plays a key role in the global SCHÜTZ production network. The production equipment which we equip our 60 locations around the world according to state-of-the-art, uniform standards is manufactured here. Our machinery portfolio includes fully automated bending systems, welding systems, complete assembly lines and much more. In the packaging sector, we use our blow moulding systems to produce tight-head and open-head drums as well as the inner bottles of our ECOBULK/RECOBULK series, the world's most successful IBC system.







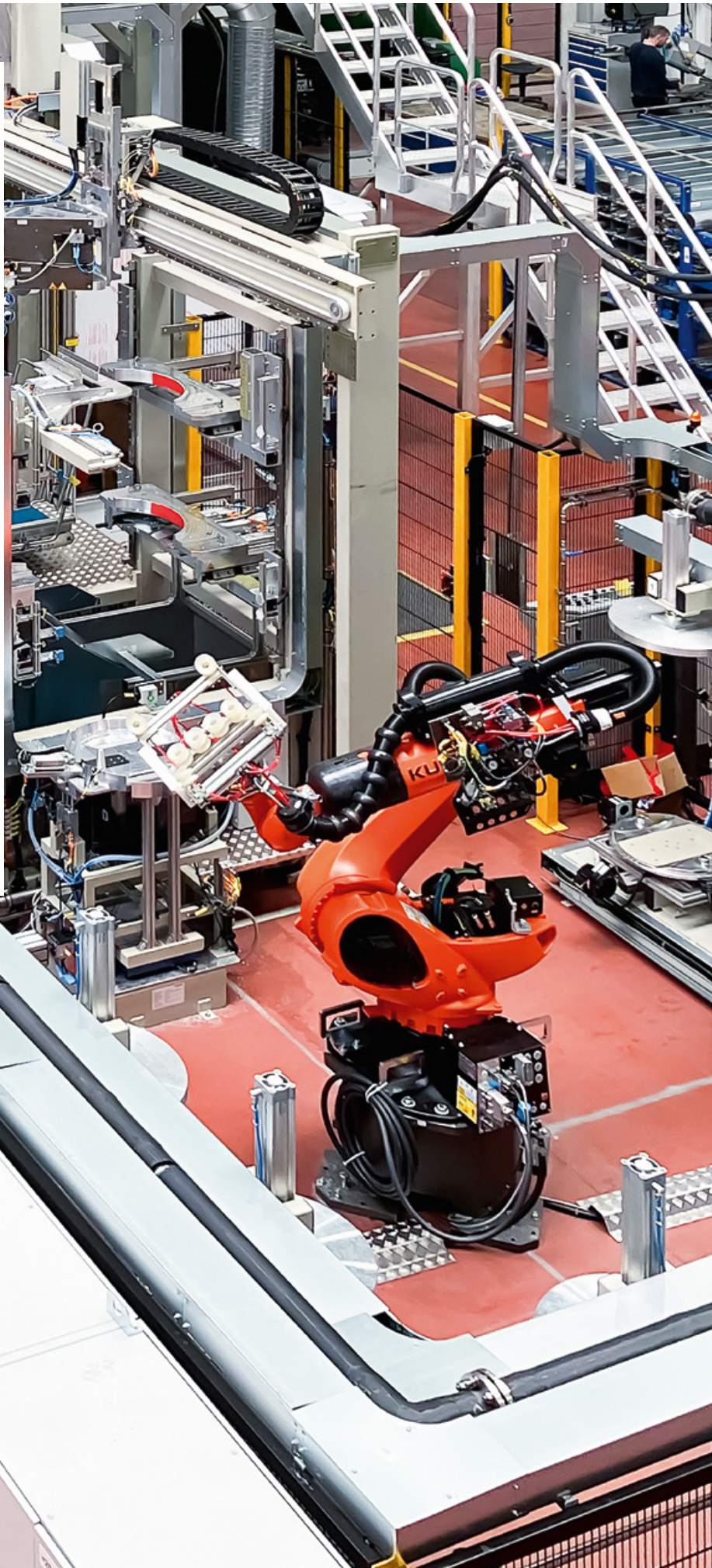
The continuous development of this key technology is one of the main reasons for our success. After mono-extrusion with one layer (1960s-1970s) and bi-extrusion with two layers (1980s-1990s), co-extrusion with up to six layers, introduced by SCHÜTZ at the beginning of 2000, represented a huge evolutionary leap in the production of PE containers. On the one hand, plasticising up to six layers allows much finer die control in production, which enables optimum material distribution and also different wall thicknesses in specific areas of the product. Secondly, the introduction of new functional materials opens

up completely new areas of application for packaging. For example, SCHÜTZ is the only IBC manufacturer in the world to produce containers with an integrated EVOH permeation barrier. Packaged foodstuffs, for example, benefit from a longer shelf life, and there are just as many advantages for packaging intended for hazardous goods. The production of our new SCHÜTZ GREEN LAYER packaging with a high proportion of recycled material is only possible thanks to our modern multi-layer technology.



The latest generation of SCHÜTZ blow moulding machines was first assembled from its individual parts and tested in Siershahn before being shipped to our production site in Tianjin, China. There, our in-house technicians and engineers will carry out the final assembly on site. Technical support, as well as regular maintenance and servicing, is provided by our headquarters in Westerwald.

With our advanced production facilities on all the world's continents, we are excellently positioned to meet future requirements and the constantly growing demand for SCHÜTZ's innovative packaging solutions. The 50th anniversary of our own blow moulding system construction is a fabulous milestone and a sign that we are committed to continuing our global growth.







**SCHÜTZ'S  
GLOBAL  
COMMITMENT**  
to sustainable energy





The awareness that we need to use our limited natural resources sustainably has led to a greater use of renewable sources of energy. Tapping into renewable energy makes a significant contribution to climate protection and therefore plays an important role in tackling climate change. As part of our sustainability programme, SCHÜTZ has defined ambitious environmental targets. The company not only continuously invests in new production facilities and an efficient circular economy but is also focussing on the expansion of renewable energy at numerous locations worldwide.

Climate change is considered the greatest challenge of the 21st century. Tackling it calls for robust action and SCHÜTZ is firmly committed to taking "Climate Action now!". This slogan stands for the mission that we are pursuing together with yachtsman and world record holder Boris Herrmann and Team Malizia: action to sustainably protect the environment and the climate. The skipper uses his position in the spotlight

to draw attention to the issue of climate protection, he analyses seawater and plants mangrove forests. SCHÜTZ is equally committed to proactively fighting climate change, and we have a strong focus on the use of renewable energies as a core element in our sustainability programme.



**USA**

BELLEVILLE

Planned construction of a photovoltaic system at the end of 2024

Expected to reduce energy consumption by 40%

NORTH BRANCH

Planned construction of a photovoltaic system at the end of 2024

Expected to reduce energy consumption by 10%



**IRELAND**

KILLALA

100% use of certified green electricity



**BRAZIL**

SÃO PAULO

Use of renewable energy

Saves 697.92 t CO<sub>2</sub>



**AUSTRALIA**

LAVERTON NORTH

Installation of solar panels in 2023

Plant supplies 15% of electricity consumption

YATALA

Installation of solar panels in 2023

Plant supplies 15% of electricity consumption





**UNITED KINGDOM**  
WORKSOP

Installation of a photovoltaic plant  
Plant supplies more than 10% of  
electricity consumption



**NORWAY**  
KONGSVINGER

Installation of 3,600 solar panels  
Saves 40t CO<sub>2</sub>



**POLAND**  
WARZAWA

Use of renewable energy sources  
through the current supplier



**FRANCE**  
MARCOUSSIS

Photovoltaic plant planned for 2024



**SPAIN**

CAZALEGAS  
Installation of a  
photovoltaic plant

System supplies approx. 30%  
of electricity consumption on  
average



**MALAYSIA**  
KUALA LUMPUR

Installation of a photovoltaic plant in 2023  
Average energy savings of 15% in the last  
five months



**Selters headquarters:  
our site sets precedents**

In 2023, for the first time at our company headquarters in Selters, Germany, renewable energy accounted for more over 75% of our total energy consumption. One factor that contributed in particular to this impressive figure is that we have increased the proportion of electricity we generate ourselves to over 50%. We have made extensive investment in power infrastructure at our headquarters as well as at our nearby sites in Ransbach-Baumbach and Siershahn. Most of our electricity comes from wind turbines that are developed in-house, and we are also pressing ahead with the installation of photovoltaic systems on all available roof surfaces. The electricity we generate is used both for the production of sustainable packaging on site and for the manufacture of components that are used in other SCHÜTZ plants around the world. **By using renewable energy, we have been able to reduce our CO<sub>2</sub> emissions at the site by 63%.**



# ENERGY SAVINGS BY 2026 3,600,000 kWh



A further capacity expansion is planned for the coming years to ensure that we can continue to produce sustainably and in a way that protects the environment and climate. **SCHÜTZ has set the strategic goal of saving a further 3,600,000 kWh of energy by 2026.**

We not only rely on alternative sources for energy generation, but also take specific measures to protect the environment and climate. One example is our ongoing investment in the latest production technologies. Our efforts here include constant modernisation and the complete replacement of production facilities before the end of their predicted service life in order to significantly reduce our energy consumption.

**We are increasingly focussing on advanced cooling technologies based on natural principles which require significantly less energy than conventional methods.**





We also utilise the most advanced processes for cleaning production waste gases. By using technologies that efficiently reuse thermal energy and utilise this to purify the air, our energy consumption can be significantly reduced.

Heat recovery technologies and intelligent control systems in the halls of our plants

around the world help us to further lower our energy consumption and achieve our sustainability goals. **At our new site in Hamburg, for example, the measures have been so efficient that no additional energy was required for heating during the cold season.**





### General climate and environmental protection measures

Our ISO 14001 certification obligates us to set environmental targets and implement an environmental management system. Compliance is regularly audited and serves to continuously improve our environmental performance. We are also certified to ISO 50001 and use our professional energy management system to tap into unused energy efficiency potential in order to reduce our consumption. To meet this goal, we record and analyse all energy consumption at plant and process level. This data is then evaluated in order to derive measures for improving the energy efficiency of systems and processes.



reduce fuel consumption by 50% per operating hour. The vehicles are already in use at all SCHÜTZ sites in Germany.

### SCHÜTZ focusses on renewable energy worldwide

As a manufacturer of sustainable industrial packaging, we are committed to organising our production processes according to ecological and climate-friendly principles. Our plants worldwide are built according to the latest production and safety standards and are characterised by maximum efficiency. We are continuously reducing our CO<sub>2</sub> footprint by implementing a variety of measures.

### The aim is to systematically optimise our energy performance and improve environmental and climate protection.

We are also actively committed to reducing the fuel consumption of our vehicles. For our swap bodies, which are used as transport containers on road and rail, we have started using new swap body converters. These state-of-the-art vehicles are equipped with a modern exhaust filter system, they produce low emissions, have low fuel consumption and increased operating comfort. **The environmentally-friendly swap body trailers allow us to**



## SCHÜTZ Photovoltaics: innovative, full-solution building technology

To handle the worldwide installation of solar systems at our locations, we have added a new business unit to the SCHÜTZ ENERGY SYSTEMS division: SCHÜTZ Photovoltaics now offers customised solutions for the sustainable generation of power. From homeowners to commercial customers or municipal clients, our customers all benefit from our decades of

**On average, 90% of CO<sub>2</sub> emissions can be avoided with renewable energies compared to electricity production from conventional energy sources.**

experience in the field of modern building technology. We plan photovoltaic systems that are optimally tailored to your needs, and we offer a comprehensive, full package that includes consulting and planning, installation and commissioning, grid registration and maintenance. With us as

your partner, you can successfully utilise the power of the sun: we pave the way for solar power production on your own roof.

### **“Climate Action now!” – let’s get to work!**

With sustainable processes and structures, we aim to create a balance between economic factors and ecological and social responsibility. SCHÜTZ’s principle has always been to invest in new technologies, continuously improve and modernise systems and thus increase profitability through higher productivity, energy efficiency and the conservation of resources.

**All systems, machines and processes are evaluated and constantly optimised from an ecological point of view.**

While our GREEN LAYER products and the SCHÜTZ TICKET SERVICE already make a significant contribution to resource conservation and CO<sub>2</sub> reduction, we are continuing our Responsible Care approach by expanding the proportion of renewable energies. The CO<sub>2</sub> balance of renewable energies is persuasive: compared to electricity production from conventional energy sources, on average 90% of CO<sub>2</sub> emissions can be avoided. **We accept our responsibility to the earth and are committed to a better future with our sustainability programme because we believe that secure, reliable energy supplies can go hand-in-hand with climate protection.**

### SCHÜTZ PHOTOVOLTAICS:

We offer a comprehensive, full package: from advice and planning, installation and commissioning, grid registration and maintenance.







Collaboration with the  
Selters volunteer fire brigade

# Working together for maximum readiness

One of the main characteristics of a successful partnership is that everyone involved benefits from it. A good example is the close and decades-long cooperation between the Selters volunteer fire brigade and our company. This closeness is also visible in the modern fire brigade headquarters, which are directly adjacent to the SCHÜTZ headquarters.





One example is SCHÜTZ's commitment to supporting the local volunteer fire brigade on a long-term basis and in many different ways.

**P**ersonal commitment and a willingness to take on responsibility: these qualities are highly valued in our company, and they are also a cornerstone of our community. **One example is SCHÜTZ's commitment to supporting the local volunteer fire brigade on a long-term basis and in many different ways, including material support and the release of employees from their duties. For example, 20 of the current 70 active firefighters work full-time at SCHÜTZ.** Despite shift work and ongoing operations, they are always available when needed. We also release the firefighters we employ for further training. This urgently needed level of support is not always available elsewhere.

**The Selters Association of Municipalities covers 21 municipalities with around 17,000 inhabitants in an area of approximately 100 square kilometres. The Selters volunteer fire brigade plays an important role in disaster control throughout the Westerwald region and beyond.**

Among other things, it provides support in the event of major emergencies affecting the regional sections of the Bundesautobahn 3 motorway and the Cologne-Frankfurt ICE route, thus providing a significant contribution to the ability to respond effectively to emergencies in the region.

The partnership between the Selters volunteer fire brigade and SCHÜTZ goes even further. For example, we support the fire brigade by providing additional and specialised equipment for industrial firefighting. This benefits both local residents in and around Selters and SCHÜTZ itself, as it empowers the firefighters to contain hazardous situations and reduce serious damage.

Local inspections also ensure that the team know their way around the factory premises and the plants. This ensures fast response times and precise knowledge of

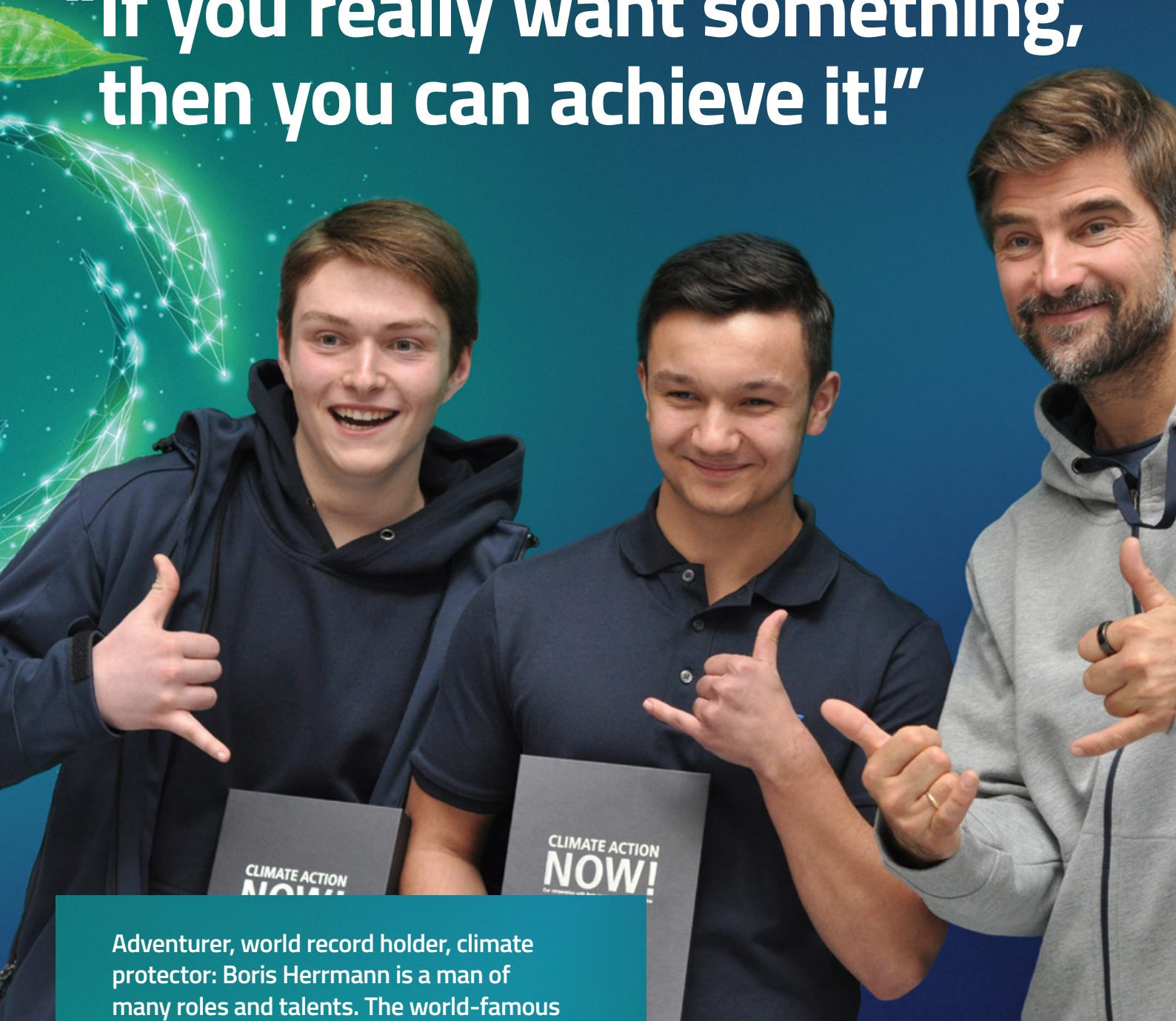


how best to fight fires at the various plants and production facilities. It also allows the team to contain potential hazardous situations, which in turn minimises the risk of damage to critical sections of the plant and production areas. **The close and cooperative partnership helps to ensure optimum hazard prevention and firefighting throughout the region.**



Boris Herrmann on SCHÜTZ's Azubi Day:

**"If you really want something,  
then you can achieve it!"**



Adventurer, world record holder, climate protector: Boris Herrmann is a man of many roles and talents. The world-famous skipper visited us in Selters for the SCHÜTZ Azubi Day, our traditional event for trainees. Speaking in front of an audience of more than 100 apprentices, Boris Herrmann talked about his experiences at sea and his commitment to protecting the world's oceans. He spent several hours answering the trainees' questions, taking selfies with them and signing numerous copies of his book.

Offering talented youngsters high-quality training opportunities is an important building block for SCHÜTZ's success. With a total of around 150 trainees in 25 different vocations, we are one of the largest training companies in the Westerwald. A good third of our junior staff joined us last year.





**Every apprentice received a copy of the book “Alone Between Sky and Sea” and could get it personally dedicated by Boris Herrmann.**

**The announcement of a prominent visitor in the form of Germany’s best-known racing sailor Boris Herrmann plus his Team Malizia colleague Cornelius Eich for our Azubi Day sparked instantaneous interest.** In a talk peppered with exciting anecdotes, Herrmann spoke about the various aspects of sailing and shared his wide-ranging expertise with the trainees. He gave a captivating account of the emotional highs and lows of his career. Eich acted as moderator and organised a lively discussion in which some of the trainees surprised and inspired us with their specialist knowledge of sailing.

Sleeping, cooking, washing – how do you do these things at sea? How do you deal with doubts or potential accidents? Boris Herrmann took a lot of time to answer the many questions our trainees had. After his presentation, everyone received a copy of his book “Allein zwischen Himmel und Meer”; at the following signing session, our apprentices were able to get their copy autographed, take a selfie and chat to the professional sailor.





## United by a love of adventure

SCHÜTZ has been a technical partner and supplier to Boris Herrmann and his Team Malizia since 2021. Many components of his racing yacht Malizia – Seaexplorer are made from our lightweight construction material CORMASTER®. As Boris Herrmann emphasised at our Azubi Day, SCHÜTZ was the first to use this honeycomb material in shipbuilding. In fact, racing boats could be described as the foundation stone of SCHÜTZ COMPOSITES. Why? This has its origins in the sporting past of our company founder, Udo Schütz, who was a highly respected racing driver in the 1960s. Later, he went on to become a very successful sailor, winning the prestigious Admiral's Cup, among other accolades.

Boris Herrmann embodies the same passion and spirit of adventure. Mocked by some as a dreamer, he sailed in his first regatta at a time when no other German yachtsman was competing in high sea races. Later, Boris Herrmann, who is now 42, sailed solo around the world as part of the 2020/2021 Vendée Globe. In the Ocean Race 2023, he even set a world record for the longest distance ever sailed in 24 hours (1,300 kilometres). He achieved this latest success on the Malizia – Seaexplorer.



Udo Schütz (company founder and owner) and Boris Herrmann

## Sailing for climate protection

Sailing is not Boris Herrmann's only passion. He harnesses the interest in his races and the publicity this generates to draw attention to a very important issue: climate change and what we can do to stop it. Herrmann promotes the UN's 17 Sustainable Development Goals on his boat, with a particular emphasis on Climate Action, as many of the other 16 goals, like education, are directly dependent on climate protection. With his Malizia My Ocean Challenge education programme, Herrmann is working to inspire children around the world to protect the oceans and teach them how to think and act sustainably. **His message: with a good education, every child and young person can achieve great things. Education creates an understanding of the world and shows, amongst many other things, how important sustainability is. He also aims to show that clear goals, conviction and hard work pay off!**





Team Malizia also makes an important contribution to environmental protection with the meteorological equipment installed on board the Malizia – Seaexplorer. This gear collects valuable data for climate research, for instance through continually analysing the carbon levels of the ocean and provides data from waters that are rarely visited and difficult to research, such as the Southern Ocean. In the Philippines, Team Malizia has established a mangrove park with one million mangrove trees, all funded by donations. The number of trees is set to double by the end of 2024. This project sees the yachting team ticking two climate protection boxes in one go: mangrove forests bind carbon and protect the coast from storms. In this way, they combat both climate change and its consequences.

### A collaboration with a bright future

We support Boris Herrmann's commitment to more sustainability. We are doing this in two ways: by providing an additional platform for our joint endeavour with our Climate Blog (available at [www.schuetz.net/climate-action](http://www.schuetz.net/climate-action)), and through our specific commitment to greater sustainability in our own industry, for example with our ecological SCHÜTZ GREEN LAYER packaging and the recycling of used packaging solutions through the SCHÜTZ TICKET SERVICE.

The collaboration between Team Malizia and SCHÜTZ will continue in the coming years. At the Azubi Day, Herrmann emphasised that he would like to build his new boat for the next Ocean Race in 2027 with us, a prospect we are greatly looking forward to. Until then, Boris Herrmann can depend on the Malizia – Seaexplorer, which will accompany him to the Vendée Globe 2024/2025 as well as numerous other events.



# 5G mast in Selters

## boosts internal performance

Efficient processes require an optimised network, whether it's for the international supply of packaging solutions to our customers or internal business processes. To further increase productivity, we recently installed a 5G tower on the roof of the SCHÜTZ headquarters in Selters in collaboration with a major German mobile phone provider.



## The 5G network acts as a strong technical basis to connect SCHÜTZ equipment (M2M).

**W**ith a tightly-knit global sales network, we are close to our customers all over the world and we guarantee fast delivery processes. Now, a different kind of network is supporting SCHÜTZ's production and logistics processes: following the installation of a new mast, the existing campus WiFi at our headquarters in Selters has been taken to a higher level thanks to a new 5G high-speed network. The 5G network, which was installed in cooperation with a major German mobile phone provider, is being used for mobile maintenance and loading. It also strengthens SCHÜTZ's business continuity, for example by acting as a back-up: in the event that other systems crash due to emergencies, the network ensures that our key business processes can continue without interruption. Thanks to the high bandwidths and low latencies, we now have real-time communication across the entire factory site.

As well as these benefits, the 5G network acts as a strong technical basis to connect SCHÜTZ equipment (M2M). As a key technology and platform for Industry 4.0, it is revolutionising M2M communication as it supports a high number of simul-



taneous network participants. It speeds up communication between machines, which makes for faster handling processes throughout the factory.

**Overall, the 5G high-speed network significantly increases the efficiency of production and logistics at SCHÜTZ – which is something that directly benefits our customers.**





# New development programme for management staff

At SCHÜTZ, we believe in investing in the professional future of our employees and helping them to realise their full individual potential. That is why we launched the SCHÜTZ Leadership Development Programme to help our management staff improve their skills, expand their knowledge and drive their success within our company. After almost two years of intensive training, nine participants from a number of production areas at our headquarters in Selters have successfully completed the programme.

The programme, which was specially tailored to SCHÜTZ's needs, aimed to further develop the participants' leadership skills with a range of training modules, coaching sessions, case discussions with colleagues and project tasks. There was a strong focus on topics such as handling conflicts, team leadership and project management. Particular emphasis was also placed on building interaction and communication between the participants.

At a small graduation ceremony attended by top executives, production management and the HR department, the participants proudly presented their projects and reported on their experience of the programme. The consistently positive feedback shows just how fruitful this

targeted training course has been. Armed with valuable new ideas and knowledge, the graduates returned to their departments where they will be implementing what they have learned in their day-to-day work. Against this background, the SCHÜTZ executives also emphasised the importance of the development programme for driving the company's future success.

**Warm congratulations to all participants on successfully completing the qualification programme and we wish them every success in implementing their new management skills.**