

COMPANY MAGAZINE

VAHLE KONKRET



22

VAHLE KONKRET

Dear readers,

After COVID impacted 2020, who would have thought that VAHLE would have a record year in 2021. All in all, we in the VAHLE Group got through the difficult time of the pandemic well and started the current year with positive momentum – and then came February 24, 2022.

Russia launches the war of aggression against Ukraine, only two flying hours away from Germany. The sympathy for the fate of the Ukrainian people is huge. The VAHLE employees also showed their sympathy through various actions. At a staff meeting in March, our employees spontaneously collected donations for Caritas emergency aid, which the company generously topped up with the approval of the shareholders (page 15).

Despite these difficult conditions at the beginning of the year – and the still-lingering supply bottlenecks due to the COVID-19 lockdowns – we can rightly be proud of what we, as an innovative and forward-looking company, have developed and implemented together with our partners and clients worldwide.

First and foremost, there is an absolute world's first from VAHLE: The Smart Collector (page 12). This world's first intelligent current collector can revolutionize processes in future production lines and high-bay warehouses. The Smart Collector collects the data of a complete conductor system during operation. Any irregularities are evaluated and reported immediately, preventing any unscheduled and expensive system outages.

As an internationally active systems supplier for mobile industrial applications, the VAHLE Group is broadly positioned in terms of industries. Our intelligent solutions for energy and data transmission are used, for example, in the food industry (Coppenrath & Wiese, page 10), in agriculture (strawberry harvest, page 7), and in the cultural sector (Volksbühne theater in Berlin, page 4).

One very important topic that we at the VAHLE Group have long focused on is sustainability. In this issue of VAHLE Konkret, we've compiled a few examples for you that show how our products have been helping to significantly reduce noise and emissions worldwide (harbors, page 8), how we're making life easier for many people (automated parking garages, page 9), and how, together with innovative start-ups, we are rethinking traffic in inner cities in ways that are stress-free and ecologically compatible (Ottobahn, page 9).

It goes without saying that we want to continue and expand along this path. The VAHLE Innovation Center for Automation in the town of Schwoich in the Austrian state of Tyrol has entered into a cooperation with Sweden's largest technical university (page 11). Young students will receive extensive input both in Schwoich and at VAHLE headquarters in Kamen, Germany, and will



certainly also come up with interesting new ideas themselves, and we're looking forward to that very much.

Last but not least, I would like to take this opportunity to expressly welcome our new trainees at VAHLE. We are proud and happy that 16 young people from the local region have opted to pursue an apprenticeship at VAHLE – as many as before the pandemic. This hasn't come about as a matter of course, rather, it demonstrates that VAHLE is still perceived as an attractive training company that is aware of its social responsibility and invests in fostering and promoting young talents as junior staff, sometimes with unusual "Olympic" methods (page 15).

I hope you enjoy reading this edition of "VAHLE Konkret".

Sincerely,
Achim Dries



WHEN THE DEAREST CHILD OF A GERMAN FAMILY IS NOT WELL...

VAHLE technology keeps things moving in the bilstein group's new logistics center

Not all drivers may be familiar with the brand names febi, SWAG and Blue Print. Yet, without them, nothing runs – in the truest sense of the word: Wear parts from these brands are installed in numerous common car and truck models, from the steering and suspension to the brake system, right through to the engine control and electrical system.

The company name febi is an acronym based on the firm's origins: Ferdinand Bilstein GmbH + Co. KG is a leading global manufacturer and supplier of car and commercial vehicle spare parts. Due to the storage

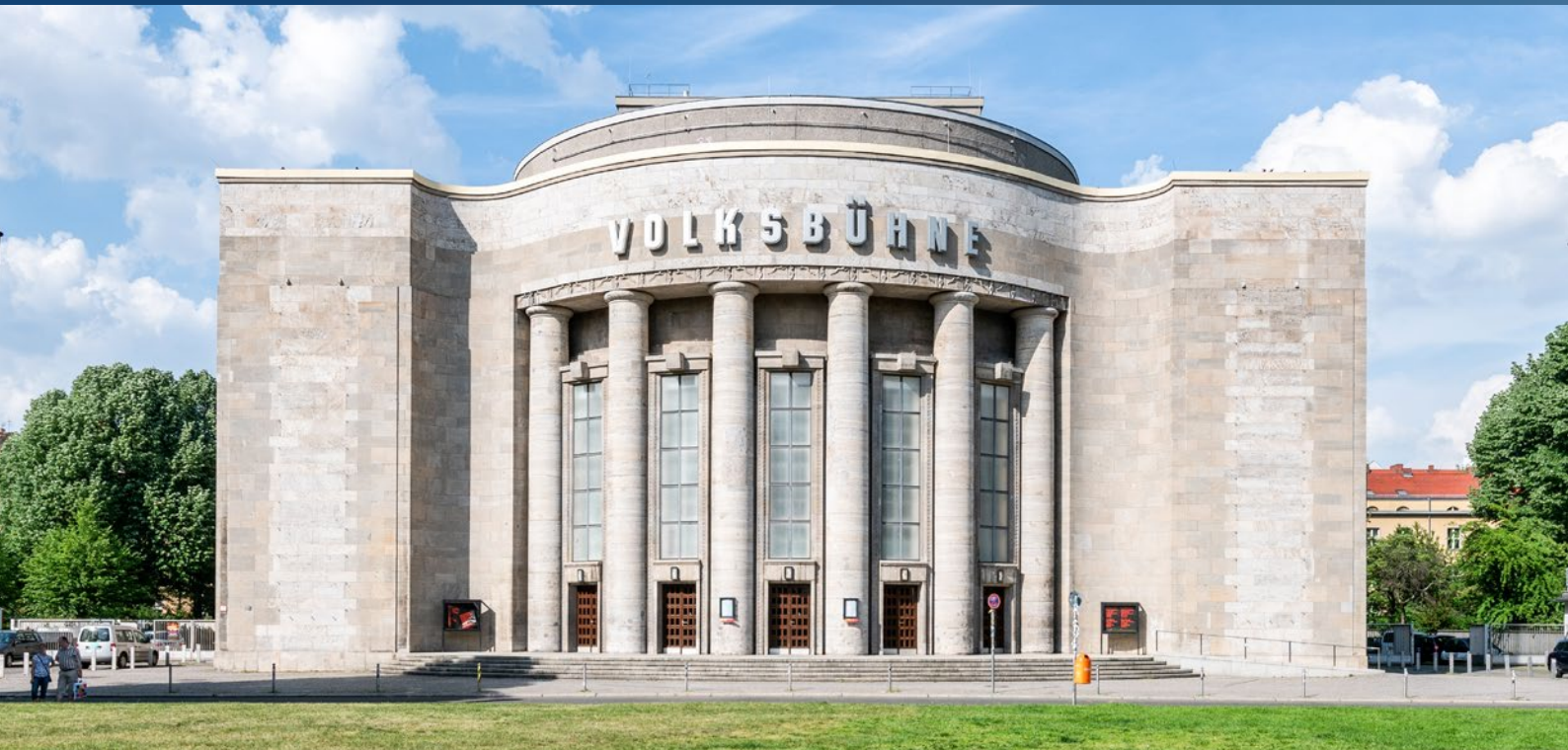


and logistics capacities at the company headquarters in Ennepetal, Germany, being exhausted, the bilstein group – the company's global brand name – decided to build an XXL complex on the site of the former Schalker Verein steelworks. Within two years, thousands of tons of steel were erected on an area the size of six soccer fields. Now, a vast quantity of products all fit under one roof.

Up to 116,000 pallets and 228,000 containers are stored here. VAHLE is responsible for the movement of the two in-floor conveyor systems (EBB) on the ground floor and upper floor as a connecting element between the storage, order picking and packing areas. The electric power for the vehicles of the in-floor conveyor is supplied by a 5-pole U10 conductor system including PE-VPN, routed over the considerable distance of one kilometer.

The bilstein group logistics center has been ramped up step by step since March 2022. Should the company continue to expand, the grounds of the old steelworks in Gelsenkirchen, Germany still offer plenty of space for further expansion: Space there will allow expansion of the logistics center by some additional 50,000 square meters.





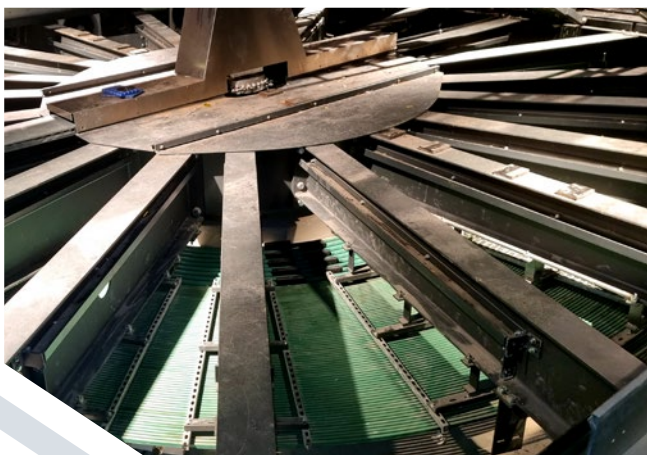
THE CURTAIN GOES UP IN THIS ICONIC THEATER

Berlin's Volksbühne rotates on VAHLE conductor system

Imposing and powerful like a Greek temple, it has stood in the heart of Berlin for over a hundred years: The Volksbühne am Rosa-Luxemburg-Platz is an iconic theatrical institution in Germany's capital. Its house ensemble has included such renowned actors such as Henry Hübchen, Corinna Harfouch, and Martin Wuttke.

Ironically, on the evening of the house premiere in 1914, its state-of-the-art technology failed: A mechanical defect paralyzed the revolving stage, and repairs were not immediately possible due to the First World War, so a different play had to be performed at short notice.

To ensure that such glitches never happen again, the Volksbühne has been relying on the dependability and durability of VAHLE products for many years now. Sixty-six slip rings are fitted with the U15 conductor system and nine slip rings with the U25 conductor system built into the hall floor.



The slip rings are divided into segments and provide the complete power supply for the huge revolving stage. They transmit electric power for everything that is needed on stage: from filming and scenery to lighting, video, and sound. Likewise, rectangular elements can be raised and lowered on the stage. The VAHLE slip rings were installed in the fall of 2005 and have only been dismantled and reinstalled once. They have been in operation ever since without any modification or maintenance.

After all that long time and under almost permanent electrical load, it became time to replace the complete system. VAHLE's fitters took advantage of the theater vacation period in the summer of 2022 to remove the old rings and current collectors and replace them with new ones. The connection cables were also replaced as a precaution.

This installation work was particularly difficult and tricky because the slip rings are arranged only 20 centimeters above the hall floor on the revolving stage, while the current collectors were mounted onto brackets directly on the hall floor. So there was extremely little working space for the replacement.

However, VAHLE wouldn't be VAHLE if our engineers didn't manage to find a solution for such tricky tasks. All worn parts were replaced and the Volksbühne am Rosa-Luxemburg-Platz was able to continue its diverse program of theater, concerts, dance, and readings after the summer break in 2022 with completely renewed stage technology.

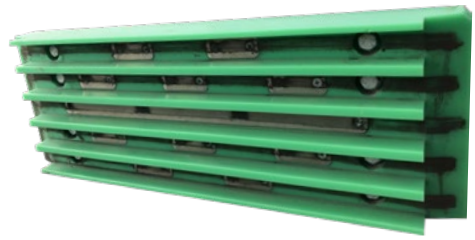
So, here's to the next 17 years, at the very least...





“UNIQUE ON THE MARKET“

Newly designed VAHLE charging contacts enable environmentally friendly logistics



As little road as possible, as much rail as possible: The CargoBeamer loading system was launched on the market in Leipzig almost 20 years ago with this major goal in mind. Since then, the company's transport volume has multiplied, and in 2021, the first terminal to operate entirely with CargoBeamer's cargo handling technology was opened in Calais, France, for the free market. The system enables fully automatic loading of all rail freight cars of a train in parallel: The truck parks its semi-trailer in one of the parking spaces at the terminal. Immediately afterwards, the driver and tractor unit can leave the terminal, or even take some other semi-trailer away with them. This prevents unnecessary waiting times.

The semi-trailer is then transferred by a terminal vehicle onto a waiting transport trough next to the transshipment track, and uncoupled there. As soon as the freight train has entered the loading dock, the movable shuttle beams on which the truck trailer is transported are pushed out to the side. The loaded tubs are pushed into the freight cars from the other side and the train is now ready to depart again. According to the manufacturer, the entire fully automated handling process only takes 20 minutes. The longest leg of the goods transport is then by rail.

The market for automated guided vehicles (AGV) is growing unabated. Therefore, in addition to its extensive standard range, VAHLE also has individually manufactured charging contacts for special AGVs in its portfolio. Among other efforts in recent months, VAHLE has been working to gain approval for its standard portfolio of battery charging contacts as "UL recognized components".

"With this level of certification, we're now able to offer global manufacturers even greater added value. This is because, in future, it will

be easier for them to obtain a UL listing for AGVs equipped with VAHLE charging contacts," explains Rüdiger Jour, Product Manager at VAHLE. For the CargoBeamer system, the VAHLE developers also made the impossible possible: For many years, it was deemed impossible to use charging contacts outdoors. "The charging contacts had to be robust and easy to clean. They're also exposed to salty and humid air," says Gunnar Schindler, Sales Manager responsible for the project at Paul Vahle GmbH & Co. KG. "So we went outside the box to experiment: For the first time, VAHLE used stainless steel instead of copper for the charging contacts. Stainless steel has a lower electrical conductivity, so the current is limited to a maximum of ten amps. But that is fully sufficient in the specific application," explains Schindler, who adds, with pride: "Our solution is unique in this form on the market."

The terminal in Calais currently has 12 such shuttle beams, each equipped with a 12-pole current collector. The voltage is only switched on when the system is completely closed. During movement, the beam is free of voltage.

So far, the system has worked flawlessly. "The contact plates are virtually indestructible. Should they nevertheless become damaged, they can be replaced individually. CargoBeamer is therefore already planning to expand the terminal in Calais by a further 24 shuttle beams. VAHLE is supplying a new generation of charging contacts for this purpose in November. In addition, there is talk of equipping other loading facilities with the system. "We are pleased to be able to our part to relieve the road traffic and handle more long-distance transport by rail in an environmentally friendly way. It's all about efficiency paired with climate neutrality that fully meets VAHLE's demands for modern logistics," summarizes Schindler.





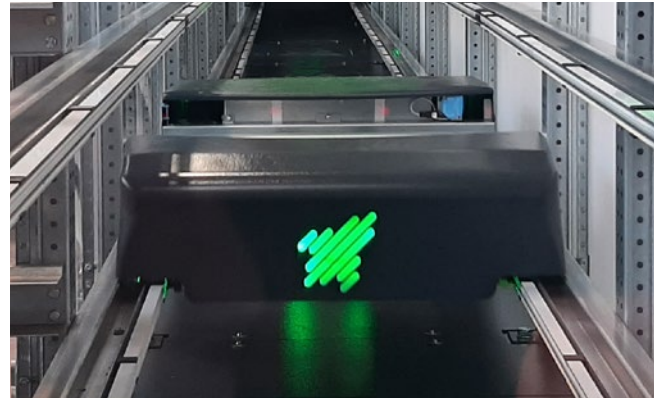
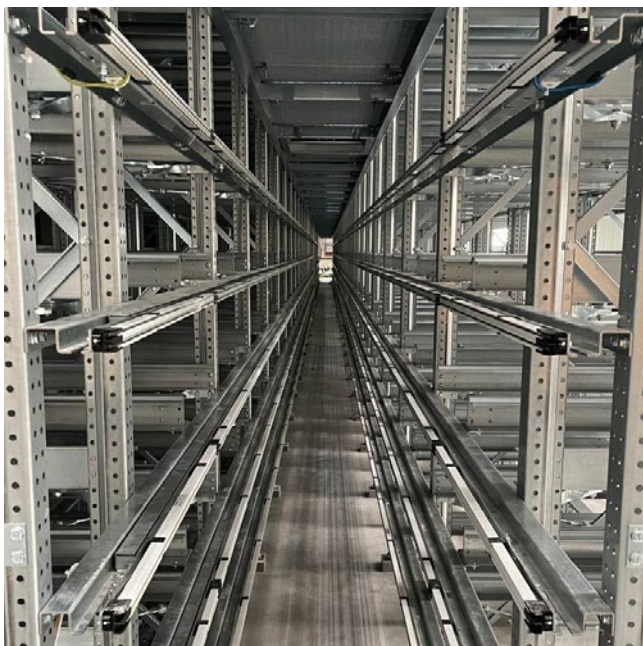
ROCKET PROPULSION FOR SHUTTLES

Warehouse logistics powered by VAHLE

Shuttle systems have become indispensable to intralogistics: They're a winner thanks to their high productivity even in the most confined spaces. Trends such as click and collect or same-day delivery require flexible and efficient warehouse solutions, especially in e-commerce.

Ever smaller shuttles in increasingly narrower lanes must be reliably supplied with power and signals, which places high demands on the technology. Paul Vahle GmbH & Co. KG in Kamen, Germany has solved this problem: "The multifunctional VCL compact conductor system is a modular construction and therefore suitable for almost all rail-guided vehicles in the small to medium performance range," explains VAHLE Product Manager Rüdiger Jour. "The smaller the system, the less space there is for the power supply. With the VAHLE Compact Line (or VCL for short), we have developed a very compact system that opens up whole new possibilities."

It's this high degree of flexibility of the Kamen-based system provider for mobile industrial applications that has also won over the young start-up Rocket Solution GmbH in Munich. ROCKETSOLUTION has been turning the shuttle market upside down since it was founded in 2019 and launched its core product in 2021: the extremely space-efficient RSX1 shuttle system. It stores containers and trays weighing up to 50 kilograms, with a flexibly scalable capacity of up to 1,500 storage and retrieval operations per hour and lane. Thanks to its innovative design and quadruple-deep storage, the RSX1 requires significantly less space than conventional storage systems. And – not entirely insignificant in today's times – it consumes considerably less energy.



With its ultra-compact design, the two- to six-pole compact conductor system can be concealed and integrated into the shuttle travel profile. "Its screwless clip technology, enables the plug and play solution to be installed quickly and easily in a few simple steps. Depending on the customer's requirements, it can be combined with the VAHLE multi support profile or other fastening variants," says Jour, describing the structural advantages.

The VCL is UL-certified and thus ensures reliable power and signal transmission at all times, even when heavily soiled, and can be equipped with copper or steel conductors as required. In addition, the system scores highly for its high performance range of 40 to 100 amps and a nominal voltage of 500 volts. "In view of small quantities and the great diversity of products handled, many manufacturers rely on dynamic high-speed applications to increase the throughput of automated warehouses. The VCL is able to fully meet all of these needs," says Jour.

A new type of shuttle system with innovative power and signal supply – the first major customer for this logistics solution "with rocket propulsion" was not long in coming: The Dresselhaus Group, one of Europe's leading wholesale companies for fasteners and fastening technology, is planning to modernize its intralogistics at its site in Herford, Germany. This family-owned company would like to automate the small parts storage area and set up an order picking system connected to automated guided vehicles (AGV). The particular challenge of this project lies in the very confined spatial conditions. In the search for a suitable solution, the RSX1 from ROCKETSOLUTION proved convincing because it can almost double the storage capacity compared to conventional automated systems. Together with the compact and easy-to-mount VAHLE VCL, a lane with 15 shuttles is initially being created. This new logistics center is scheduled to open in spring 2023.





STRAWBERRY FIELDS FOREVER

Sweet fruits are harvested with the help of VAHLE conductor systems

Strawberries are one of the most popular fruits worldwide because of their incomparably sweet taste. The United States alone – the world's second largest producer – produces nearly 1.5 million tons of strawberries every year, harvested from extremely large, flat fields. And, similar to the asparagus harvest in Germany, many American farmers keep wondering: Who is going to pick them all?!

The Spanish company AGROBOT has developed a solution to this problem: With the help of a giant farming robot, a single employee can now harvest the fruit of an entire strawberry field while comfortably seated, and without getting sticky fingers. The AGROBOT SW 6010 is the first

fully automatic strawberry harvester, and the engineers at Agrobot rely on the expertise of VAHLE in Kamen, Germany to power the robotic picking arms of this innovative device.

The tried and tested U10 conductor system from VAHLE ensures that the otherwise laborious and time-consuming picking process is completely automated. The Agrobot moves along the rows of beds with several gripping arms, while a camera system analyzes the shape and color of each berry. If it discovers a ripe fruit, a gripper holds it by the stem and cuts it off, depositing it in a basket or on a conveyor belt for later packaging.

Ultrasonic sensors navigate the harvester and ensure a safe distance between the robot arms, rows of beds, and the ground. Strawberries are a very delicate fruit. Unlike apples or bananas, they do not ripen afterward, so they must be harvested when they are already red and soft. The robot never touches the fruit, but cuts it off at the stem. This ensures that the fruit ends up in our supermarkets in the best condition.

The Agrobot could work around the clock and harvest up to 25,000 strawberries a day – and thanks to the VAHLE power supply, this hardworking helper never runs out of energy.





VAHLE GOES GREEN

Electrification and automation cut tons of CO₂ emissions

Combating climate change is a task that the VAHLE Group has been committed to for many years, and that it is constantly advancing with its innovative solutions in various industries. The consequences of global warming have been starkly brought home to us in recent months, with extreme droughts on the one hand and destructive storms on the other.

The Glasgow Climate Pact has set a maximum global warming target of 1.5 degrees. To achieve this goal, we need creative ideas and modern technologies that make us independent of fossil fuels. Below are some examples of how VAHLE is helping to shape the green future in very different ways.

FULL STEAM AHEAD: THE EMISSIONS-FREE SEAPORT



For many decades, diesel was the number one fuel for powering all vehicles moving in and around seaports around the world. Yet, little by little, ports around the world are being electrified and automated, and emissions are noticeably diminishing. And Paul Vahle GmbH & Co. KG from Kamen, Germany is a key partner for the port operators in this process.

VAHLE received its first major order for sustainable conversion of a seaport more than 10 years ago from Hong Kong, followed by orders from Turkey, and then a real icebreaker: The first projects of Hutchison Ports Holding in Lazaro Cardenas in Mexico and Balboa in Panama. And from this point forward began a close and trusting cooperation with the world's leading port network. In 2014, VAHLE established a separate business unit dedicated to providing comprehensive service and support to the global port market.

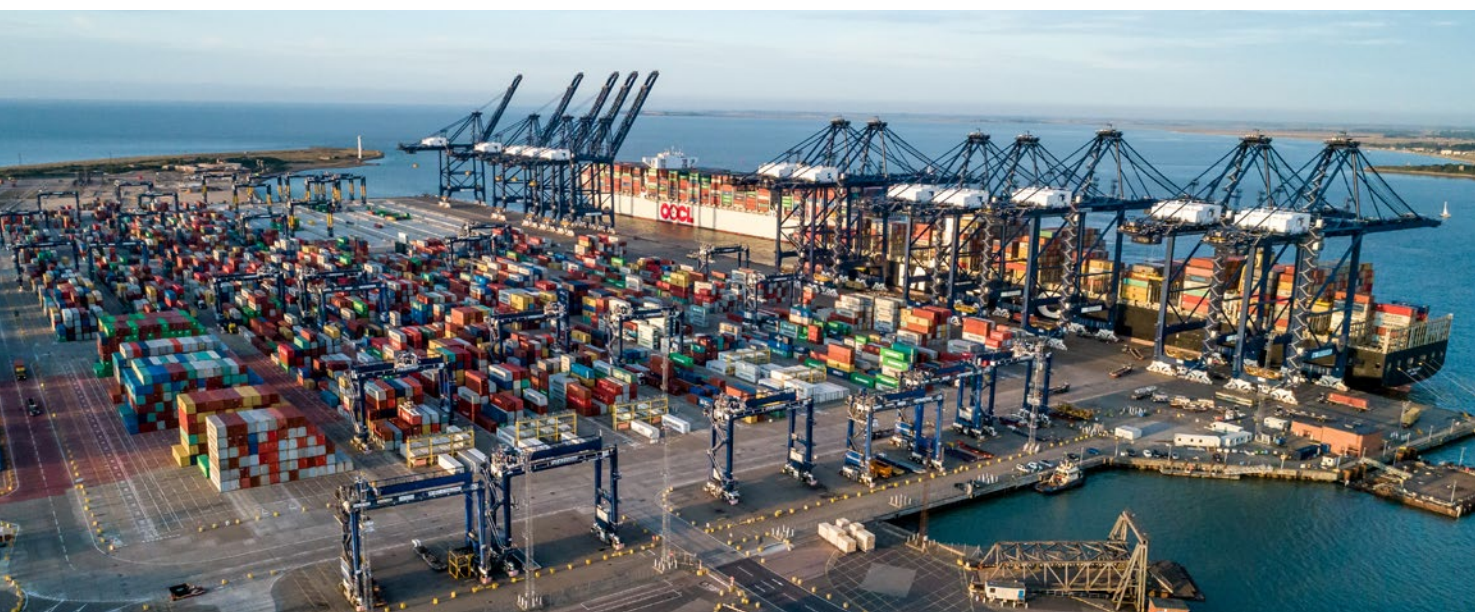
The next milestone was the conversion of the Felixstowe container port in Great Britain in 2015. VAHLE has not only electrified more than 70 RTGs and almost 70 container blocks, but also automated them using its own SMGX data communication system which allows them to be remotely controlled. Just one year later, the improved air quality in the port area was clearly measurable, and the "eRTG Project Team" won the "Port of Felixstowe Environmental Award." Our work with the customer Asyaport, the first transit container port in Turkey, went "ex-

cellently" in the truest sense of the word: Following electrification by VAHLE, Asyaport was certified by the European Sea Ports Organization for the Ports Environmental Review System (PERS).

Sustainability and environmental protection can only succeed if the world's leading technology nations with high CO₂ emissions also get on board. In the meantime, VAHLE has succeeded in electrifying four container ports of the Indian customer Adani since 2019. In the United States, as well, two seaport projects are already in the implementation phase.

VAHLE has already helped save a staggering 706,000 tons of CO₂ emissions at ports worldwide since 2011. This is the equivalent footprint of flying from Berlin to Washington D.C. 276,062 times. Every hour more than 12.65 tons of CO₂ are saved in these ports along with more than 6,100 liters of diesel, which corresponds to five times the CO₂ emissions for a flight from Berlin to Washington D.C.

And that's not all: The VAHLE developers continue to research sustainable product and system solutions. Jaroslaw Warzecha cites a few examples: "The use of direct current, a smart energy management system and renewable energies produced from solar, wind or biomass will make our customers' operations even more efficient, ecological and independent, ensuring ports worldwide have a green future."



VAHLE ELECTRIFIES OTTOBAHN AS THE TRAFFIC CONCEPT OF THE FUTURE



Imagine a suspension railway with individual cabins that can be lowered at any point along the route, like a taxi gondola on rails. What sounds like something out of a science fiction blockbuster will in reality soon be in a test run: The OTTOBAHN, the emission-free transport concept of the Munich-based start-up of the same name, could revolutionize mobility within inner cities, and VAHLE is on board with its know-how: The Kamen-headquartered systems supplier has entered into a strategic partnership with OTTOBAHN and is supplying almost 4 km of U25/90AE conductor system for a test track that will safely and reliably provide the gondola rail with electric power.

In contrast to conventional means of public transport, the OTTOBAHN runs autonomously and “on demand.” This means that the individual gondolas communicate with each other via artificial intelligence and coordinate their travel paths. Guests can get on or off at any point along the route and ride comfortably at a height of 5–10 meters above the rest of the traffic. The OTTOBAHN is the sustainable solution for preventing the imminent collapse of traffic in inner cities, without noise and exhaust fumes.

It took just three years from the founding of the start-up to the groundbreaking test track near Munich. In the coming year, five OTTOBAHN cabins will be doing their rounds on an oval about 1 km long, and cover



100,000 test kilometers. Virtually silent and with a flawless CO₂ balance sheet.

Together with OTTOBAHN, VAHLE made its first appearance in September 2022 at InnoTrans in Berlin, the international trade fair for transport technology, where it caused quite a stir with this innovative and green mobility idea.

A PARKING LOT WITHOUT EXHAUST GAS EMISSIONS



The DOKK1 – Scandinavia’s largest and most modern library – in Aarhus, Denmark, is a dream come true for those who otherwise waste a lot of time looking for a parking space, who sometimes forget exactly where they parked their car – or get annoyed by selfish parkers who hog multiple spots at once. So, in other words, for all drivers.

The cars are parked in a parking cabin right behind the entrance to the parking lot. The driver receives his or her parking ticket and can simply leave their cars there – all the rest is automated. The vehicle is transported via elevator to one of the free levels, from where it is picked



up by the transfer vehicle. After that, the Lödige Shifter will take you to a free parking space. And at the end of the parking period, the car is automatically transported back up at the push of a button.

Lödige Industries, a leading global supplier of intralogistics systems and elevator solutions, has created a sustainable parking system of the future here back in 2015, and has opted for the reliable power supply provided by U25 conductor system from VAHLE. They ensure that the vehicle's engine can remain switched off while parking and exiting. This not only saves time and nerves, but also reduces noise and exhaust fumes. Nobody has to drive endless loops until they spot a free space, or wait with the engine running until someone finally vacates their parking space.

Hence, the DOKK1 in Aarhus is one of many examples worldwide where VAHLE has for years been developing low-emission or even zero-emission solutions together with its intralogistics partners to combat climate change. The market for these “green” innovations is constantly growing, as is the VAHLE product portfolio for forward-looking, environmentally friendly technologies.

True to our motto “Your Vision – Our Solution.”



FROM A GOLD PIECE TO A BENJAMIN BLÜMCHEN CAKE

Coppenrath & Wiese confectionery uses VAHLE conductor systems in new warehouse

Around 50 years ago, two cousins – businessman Aloys Coppenrath and confectioner Josef Wiese – had a vision: They wanted to make tarts and cakes and sell them via food retailers throughout Germany. At that time, the absolutely revolutionary method for this was shock freezing: The products are frozen at arctic temperatures immediately after production and thus arrive freshly baked at the customer.

The rest is history: Today, Coppenrath & Wiese is Europe's largest manufacturer of frozen baked goods. The range of brands includes around 70 items, from tray bakes to rolls and cream slices to the Benjamin Blümchen cake, which is also a classic favorite particularly among adults.



In the logistics center of their confectionery in Osnabrück, Germany, things were getting a little cramped, despite the fact that they already had five deep-freeze high-bay warehouses with a total capacity of 40,000 pallet spaces. In 2019, planning for the sixth deep-freeze high-bay warehouse kicked off, and MFI GmbH from Benningen am Neckar was awarded the contract for the pallet conveyor system. This company is an expert in intralogistics in the food industry. The ultra-compact VCL (VAHLE Compact Line) shuttle conductor system from Kamen ensures a

smooth and continuous power supply to the Multiflex shuttle system supplied by Dambach. It meets the requirements of being robustly operable at -25°C as well as space-saving.

“The multifunctional VCL is mainly used for the 2-pole DC power supply of small and midsize shuttle solutions with payloads of up to 300 kg. Due to its scalability, however, it can be used for almost all track-guided vehicles,” explains VAHLE Product Manager Rüdiger Jour. “The 4-pole combination of the VCL is used for handling palletized goods with payloads of up to 1.5 metric tons. With the VCL, we have developed a modular solution that can be individually adapted to each customer's needs,” says Jour. In the logistics center of Coppenrath & Wiese, 12 lanes were installed, each with 81 meters of 4-pole VCL with 400 volts. In total, this means almost 2 km of VCL 2 conductor system.

The Multiflex Shuttle is an XXL Power Shuttle that moves complete Euro pallet goods. The orbiter shuttle, which stores and retrieves the pallets at multiple depths, is also mounted on the system. These orbiters are also loaded via the VAHLE VCL conductor system.

The DAMBACH MULTIFLEX is an automatic pallet shuttle system used to store Euro and industrial pallets in deep-freeze high-bay warehouses. The multi-deep storage and retrieval is carried out by the DAMBACH COMPACT SHUTTLE, which is dynamically transported in the lane by the carrier. The carrier is charged while driving via VAHLE VCL conductor systems.

Around 20,000 pallet spaces at Coppenrath & Wiese in Osnabrück are supplied with VAHLE electricity and up to 200 pallets are stored and retrieved per hour. Around 40 company-owned deep-freeze trains deliver the goods from Osnabrück to the central warehouses of the food retailers in Germany, ensuring consumers can access their favorite products any time they wish.



ECONOMY MEETS SCIENCE

Research cooperation between the VAHLE Innovation Center in Schwoich, Austria and the University of Stockholm

The Kamen-based VAHLE Group has been operating an innovation and development center for automation in the Austrian town of Schwoich near Kufstein since 2013. There, in the heart of Tyrol, the technologies of tomorrow are being researched to expand VAHLE's core business. From a simple conductor rail to a system supplier for communication systems designed for contactless power and data supply. These systems are used, for example, in the port, conveying and logistics sectors, as well as in railway and elevator technology and for powering amusement park rides.

To further strengthen the international competitiveness of the VAHLE Group, the company's Innovation Center in Schwoich, Austria is working closely with the Royal Institute of Technology (KTH) in Stockholm. KTH is Sweden's largest technical university, and one in three Swedish engineers is educated here. VAHLE CEO Achim Dries has high hopes for this long-term cooperation:

“We want to further expand our company's leading position by focusing on innovative developments, the latest research, and cutting-edge

technologies. Together with the research and development department at our headquarters in Kamen, VAHLE Automation in Tyrol forms a technology axis that is now even more intensively networked internationally. In the future, we want to assign doctoral, master's and bachelor's degree topics to students in Sweden on a regular basis, which will also provide new impetus for our engineers. We will also establish a Technology Advisory Board in the VAHLE Group, of which Professor Gross will be a permanent member.”

James Gross is a professor at the Faculty of Electrical Engineering and Computer Science at KTH in Stockholm. His research into mobile systems and machine-to-machine communication has received numerous awards. During his visit to Schwoich, Gross emphasized that this close networking of business and science is forward-looking: “The symbiosis of practice and theory is a successful model from which both sides can benefit enormously. We look forward to a lively exchange with the VAHLE colleagues.”





FINDING FAULTS BEFORE THEY CAUSE PROBLEMS

Smart Collector – VAHLE develops the first intelligent current collector system

Time is money – this is particularly evident when an industrial plant experiences an unscheduled outage and a lot of time is lost before the root cause is found. Finding that one fault that led to failure in a production line that is several kilometers long and sometimes difficult to access is like the proverbial search for a needle in a haystack. It is precisely for this problem that VAHLE GmbH & Co. KG in Kamen, Germany has developed a solution: “The Smart Collector from VAHLE is the world’s first intelligent conductor rail monitoring system,” says Jessica Genz proudly. The Smart Collector Product Manager at VAHLE is absolutely convinced that this product will revolutionize the market.

3D sensors on the current collector arms permanently monitor the conductor system during operation, and collect analysis data on the condition of the rails. These data are transmitted to the main unit in real time. According to Genz, the advantages for the customer are obvious: “The Smart Collector recognizes anomalies at an early stage and can assign them with precision.

The analyzed measurement data are visualized with software, which means that the

operating company can permanently monitor the status of their system digitally with any mobile device. Any disturbances in the movement process can be corrected in a targeted and timely manner. This significantly increases the service life and productivity of the system.”

The data collected from the Smart Collector help to determine the optimal point in time for maintenance, and thereby eliminate unnecessary routine inspections. Required spare parts are ordered “just in time” via the VAHLE Customer Hub, and no longer have to be stored in large quantities. The Smart Collector therefore fulfills the customer’s wish for predictive maintenance so that production downtimes do not occur in the first place.

While it was specially developed for electrified monorail systems and storage and retrieval systems, it can also be used in other types of systems, and can be integrated into both new and existing systems and combined with existing technology.

The Smart Collector is currently in operation in four pilot plants at well-known industrial companies, and is running trouble-free. One thing is certain for Jessica Genz at VAHLE: “This is the starting signal for the complete digitalization of conductor systems!”





POWER AND DATA FROM A SINGLE SOURCE

VAHLE and CoreTigo conclude a strategic partnership

The packaging machine industry is booming – and with its CPS 140 kHz U015 and U007 pickup, VAHLE has launched an innovative solution for linear transport systems that give packaging machines a real efficiency boost (see also VAHLE Konkret 2020). These movers are driven along a guide rail via individually switchable solenoid coils that absorb the electric power inductively. The contactless power transmission in a small size with low weight is unique in the industry, and enables maximum speeds that cannot be achieved with conventional power transmission systems.

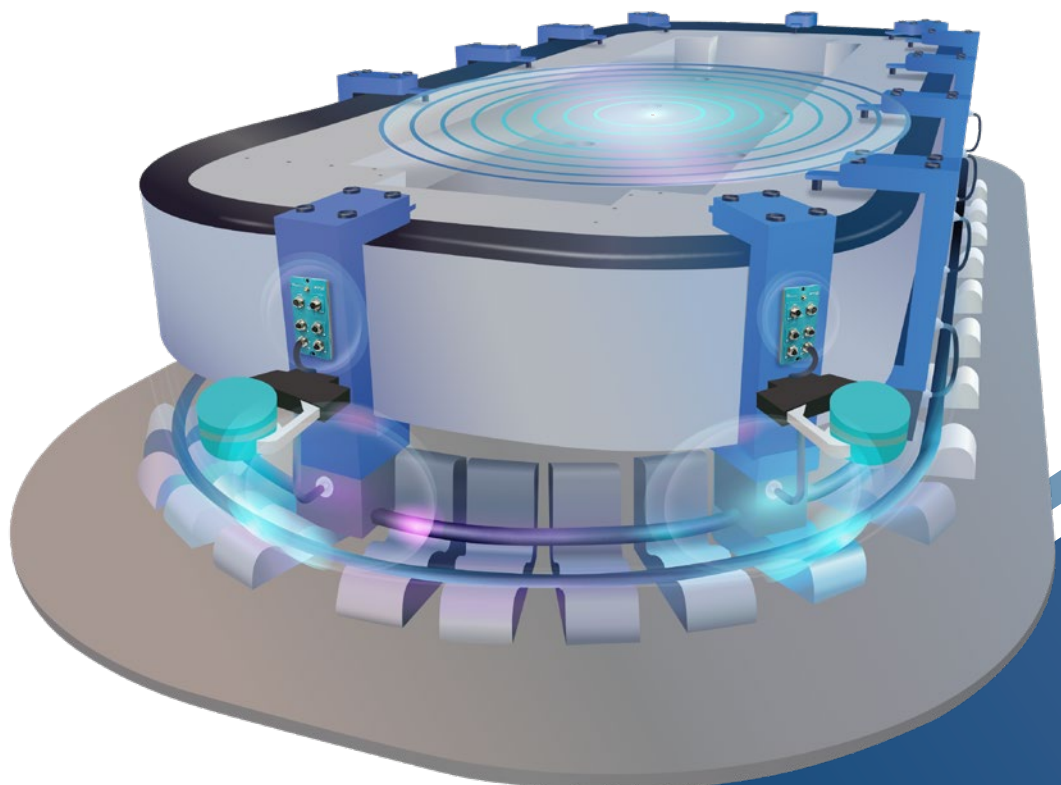
Through the long-term cooperation with CoreTigo, VAHLE is expanding its range to include contactless data transmission. Israeli technology provider CoreTigo is a leading manufacturer of wireless communication systems for factory automation, based on the IO-Link wireless standard.

“We not only want to improve our range of services by further developing our own products, but also by providing our customers with a comprehensive overall package through targeted strategic partnerships,” says Achim Dries, CEO of the VAHLE Group. “CoreTigo’s real-time wireless data transmission is an ideal addition to our inductive power supplies, and expands the VAHLE portfolio of system solutions.”

The advantages for the packaging industry are obvious: Production is increased by simultaneously running assembly processes while the movers are in motion. In addition, many different packaging variants (size, weight, shape, material) can be used efficiently on a single machine, so that retooling/changeover times can be significantly reduced or eliminated altogether.

The machines take up less space because fewer cables and external robots are required, and the permanent data transmission in real time means that the machine is “serviced” and maintained virtually without interruption.

In the long term, this system solution is to be extended to other markets. “Thanks to the strategic partnership with CoreTigo, we can respond even faster to the growing requirements of Industry 4.0. Customers in various areas will benefit from this,” emphasizes VAHLE Managing Director Dries.



ARCHERY, MILKING COMPETITION, AND RUBBER BOOT THROWING CONTEST

VAHLE trainees have fun at the “Farmer's Olympics“

In early August, some 40 VAHLE trainees of various professions and years set off together with their trainers on a trainee excursion, initially to an unknown destination. “We were supposed to be at the company headquarters at a certain time, and a bus picked us up from there. But we didn't know where we were going,” says Carina Arauner, Trainee Media Designer at VAHLE in her third year of training.

The surprise was all the nicer when a so-called “Farmer's Olympics“ was on the agenda at a farm in Münster. The trainees and their trainers were divided into six teams and had to compete against each other in various disciplines: wheelbarrow racing, tug-of-war, archery, and much more. In addition to the fun factor, a day like this promotes team building and camaraderie. That was also desperately needed after the long pandemic period, says Arauner: “It was so nice to see everyone else ‘in real life’ for a change, and not just on-screen in online meetings. Unfortunately, I spent part of my training working from home, as did many trainees in my vocational school class who work for other companies.“ A classmate once told her that she only knew all her work colleagues from the top of their head to their waist: “I don't even know if they have legs.“

The trip was also a good opportunity for the VAHLE trainers to exchange ideas and get to know their “protégés“ on a personal level outside of the company, and vice versa, of course. Six teams competed in the Farmer's Olympics for glory, honor, and a certificate, and at the end everyone was rewarded with barbecue and salads.

The next big meeting will be VAHLE's trainee Christmas party. Until then, some of them will work on joint projects across departments. When Carina Arauner tells her classmates at vocational school how much the instructors at VAHLE care for the young people and all the opportunities they are given, she says they are often envious: “I am very happy here. It was absolutely the right decision to do my apprenticeship here at VAHLE after graduating from high school. Many of my friends started studying one subject or another at university, but then dropped out after a short time. I've always felt comfortable here at VAHLE, despite the difficult conditions I faced during the pandemic, and I feel very well prepared for my future professional life.“





FINALLY CELEBRATING TOGETHER AGAIN

First VAHLE Summer Party after a four-year break

Colorful pennant chains fluttered over the company premises, bouncy castles and carousels created a lively folk festival atmosphere, and the visitors were beaming in the sun: The VAHLE Summer Party at the beginning of July 2022 fully compensated for the cancellations of recent years due to Covid-19.

Almost 550 employees and their families celebrated in high spirits all day on Saturday, and VAHLE CEO Achim Dries did not miss the oppor-

tunity to make a toast here and there: "Finally, we can freely celebrate together again. As you can see, colleagues have really missed this, so I am glad that so many have come along."

VAHLE put on quite a show to entertain everyone, both young and old: The mini-railway, bouncy castle, and magician were constantly swarming with children, while adults sometimes joined in secretly at the high striker or balloon knotter.



In addition to fun and games, people showed great interest in the guided company tours on offer. Achim Dries proudly pointed out a number of innovations and technical product highlights: "Some enormous improvements have been made on our company premises in recent years. We've modernized our production and logistics halls, acquired two state-of-the-art production robots, and installed both an automated honeycomb and automatic small parts storage system. Today, VAHLE produces under the most modern industrial conditions, quite different from the way it was in the past," says the VAHLE Managing Director.

EUR 25,000 DONATED TO UKRAINE

VAHLE shows its solidarity

There is enormous compassion for the fate of the Ukrainian people, including at VAHLE. On the initiative of the employees, a fundraising campaign for the war victims was immediately launched at an employees general meeting in March.

These efforts EUR 2,100, which was topped up to EUR 25,000 by the VAHLE company. The money was given to Caritas Emergency Relief, which distributes hot meals, food and toiletries, and provides sheltered sleeping places in Ukraine. In addition, psychologists and social workers on site support traumatized victims of war.

VAHLE Managing Director Achim Dries proudly reports: "We immediately agreed across the company that we wanted to do our utmost to help the people in Ukraine quickly and without any red tape. We witness this war with great dismay because it not only threatens the people on the ground, but it is a direct attack on all the principles of our international blueprint for lasting peace."

For this reason, VAHLE imposed an export ban on all its products to Russia and Belarus effective March 3, 2022, just one week after the war began.





YOUR VISION – OUR SOLUTION

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