

INTRALOGISTICS

SMART AND SAFE MATERIAL FLOWS



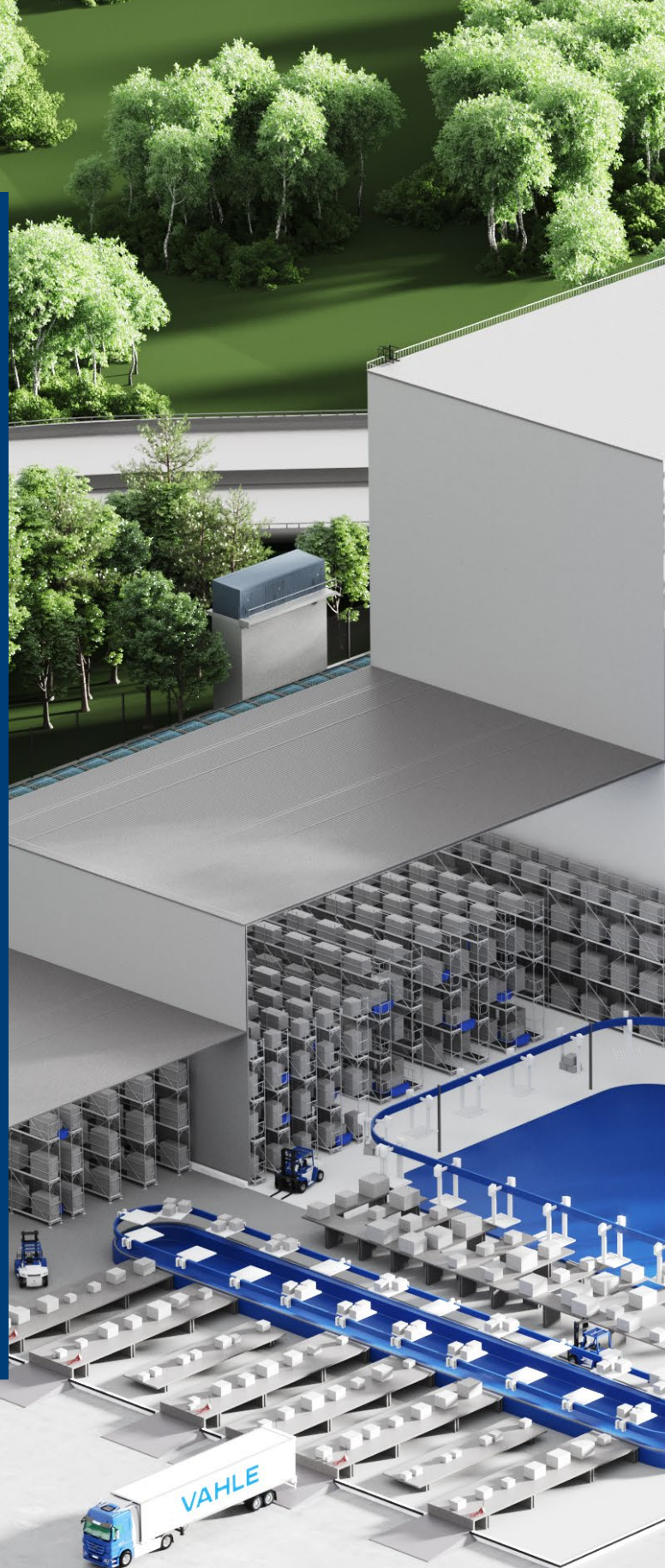
EFFICIENCY FOR TRANSPORTATION OF GOODS

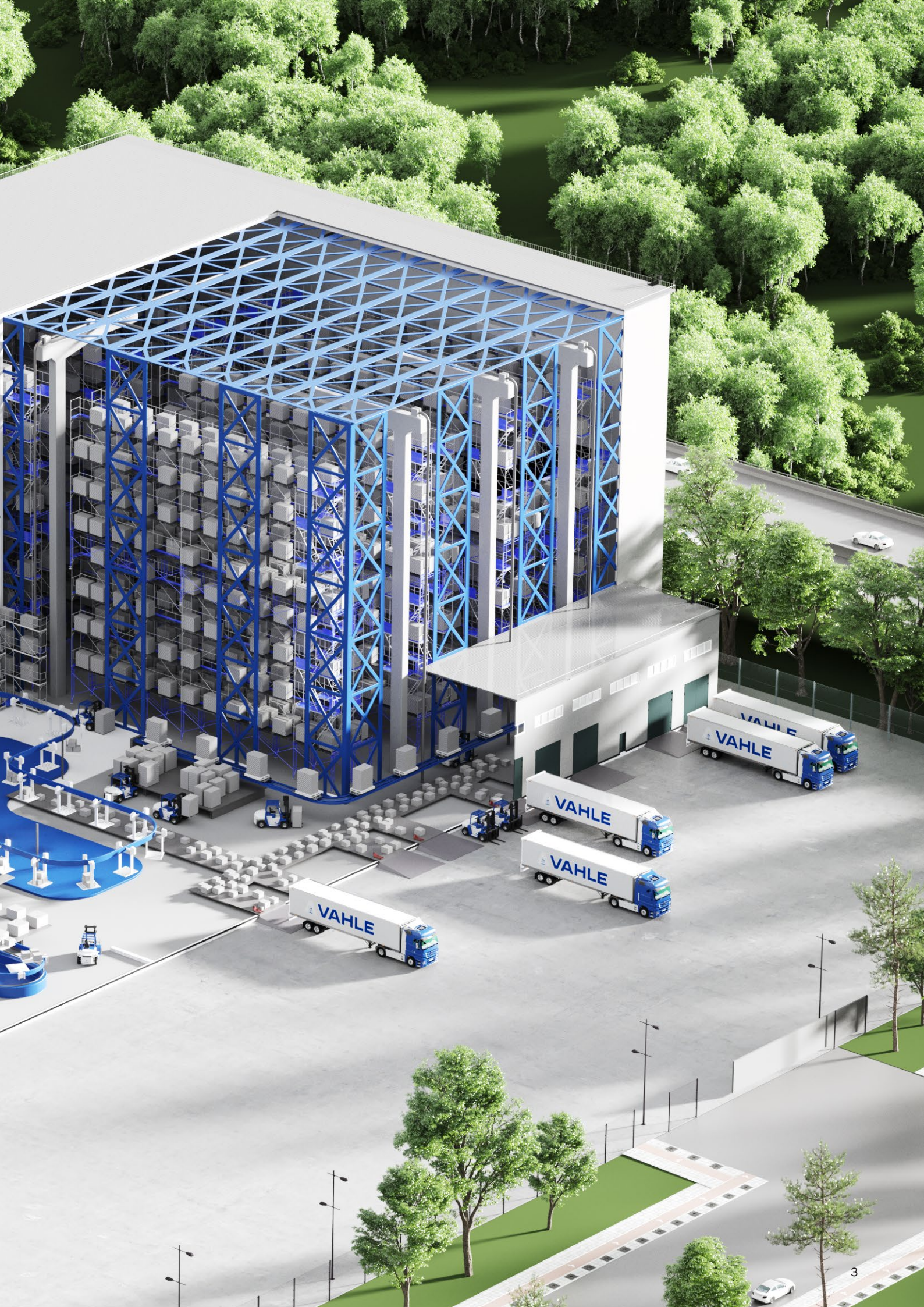
Intralogistics is experiencing significant growth, driven primarily by the ever-increasing expectations of consumers for timely, fast, reliable and cost-efficient fulfillment. Manual processes can no longer meet these requirements, neither from an efficiency nor a sustainability perspective.

In addition, the space available for conveyor technology is becoming increasingly limited. On production floors, automation offers the potential to make material flows more efficient. The VAHLE Group focuses on an intelligent combination of electrification, secure data communication as well as positioning and control systems to optimize intralogistics processes in industrial process chains and distribution centers, true to the motto: Your Vision. Our Solution.

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RELIABLE AND SPACE-SAVING

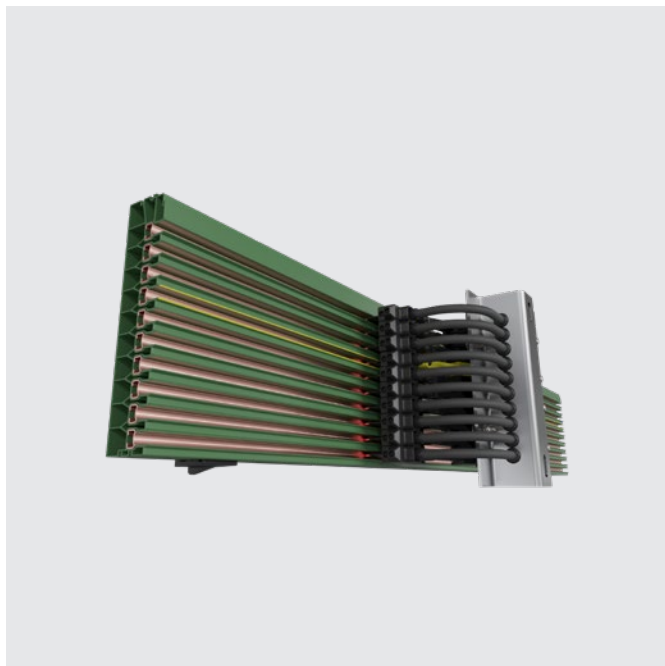
EQUIP YOUR AS/RS FOR OPTIMAL PERFORMANCE

The heart of automated high-bay warehouses

The VAHLE portfolio offers customized solutions for the complex requirements of automated storage and retrieval machines in high-bay warehouses. Fast, reliable and space-saving conductor systems are the key for optimal performance and a safe operating process. VAHLE solutions can be easily combined into a system of energy and data transmission and also offer the option for standard positioning technologies and add-ons.

Challenges

- Increasing output quantities
- Faster travel speed
- Increasing variety of articles
- 24/7 availability
- Extreme ambient conditions, e.g. in deep-freeze warehouses down to -30 °C



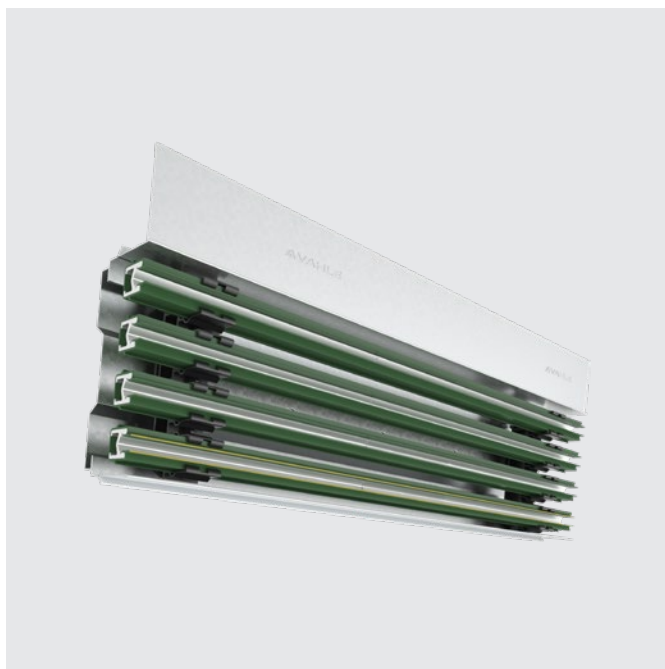
ENERGY TRANSMISSION

VKS10: Compact and modular

With a design with up to 10 poles and a wide power range, the contact-protected system is suitable for aisle, lift mast and multi-applications.

Highlights

- Compact design for minimum installation space
- Maximum pole variance and large power spectrum
- High compatibility with standard rack profiles and positioning systems
- Also suitable for use in refrigerated and deep-freeze warehouses
- Plug-and-play installation with clip technology and plug-in connections as well as VTP support structure



ENERGY TRANSMISSION

U25: Strong and safe

The U25 insulated conductor system offers impressive versatility. The variety of different conductor materials in an aluminum/stainless steel version makes it a cost-effective alternative to the copper version.

Highlights

- Wide range of applications due to different conductor materials
- Suitable for aisle travel and lift mast applications
- Also suitable for high performance requirements, e.g. for heavy-duty storage and retrieval machines
- For use in refrigerated and deep-freeze warehouses
- Simple installation in combination with the VMT support profile





CONSISTENT AND DURABLE

SHUTTLE SOLUTIONS FOR MAX. PERFORMANCE

Everything close at hand: shuttle for optimal storage

Today's variety of materials, product selection and frequently used goods require particularly efficient storage. This is of critical importance in a 24/7 operation where reliability and performance are essential. Automated shuttle warehouses meet these requirements for a modern logistics system.

Shuttle systems enable extremely fast transportation of materials and goods with short access times. VAHLE offers a variety of solutions that are specially designed for high speeds and intensive use cycles of shuttle systems. Our conductor system guarantee maximum reliability to meet the high demands of intralogistics.

Challenges

- Increasing output quantities
- Faster travel speeds
- Reduction of available installation space due to increasing variety of articles
- Compatibility with existing travel profiles



ENERGY TRANSMISSION

SLS: Efficient and unique

The shuttle charging system from VAHLE, unique on the market, guarantees high energy outputs and thus enables particularly fast charging. Variable lengths and loading positions are made possible by its modular design.

Highlights

- Fast charging of energy storage devices such as caps with high charging currents of up to 140 amps and 48 volts
- Maximum efficiency thanks to short charging cycles and high ramp-up speeds
- Simple and freely scalable plug-and-play installation



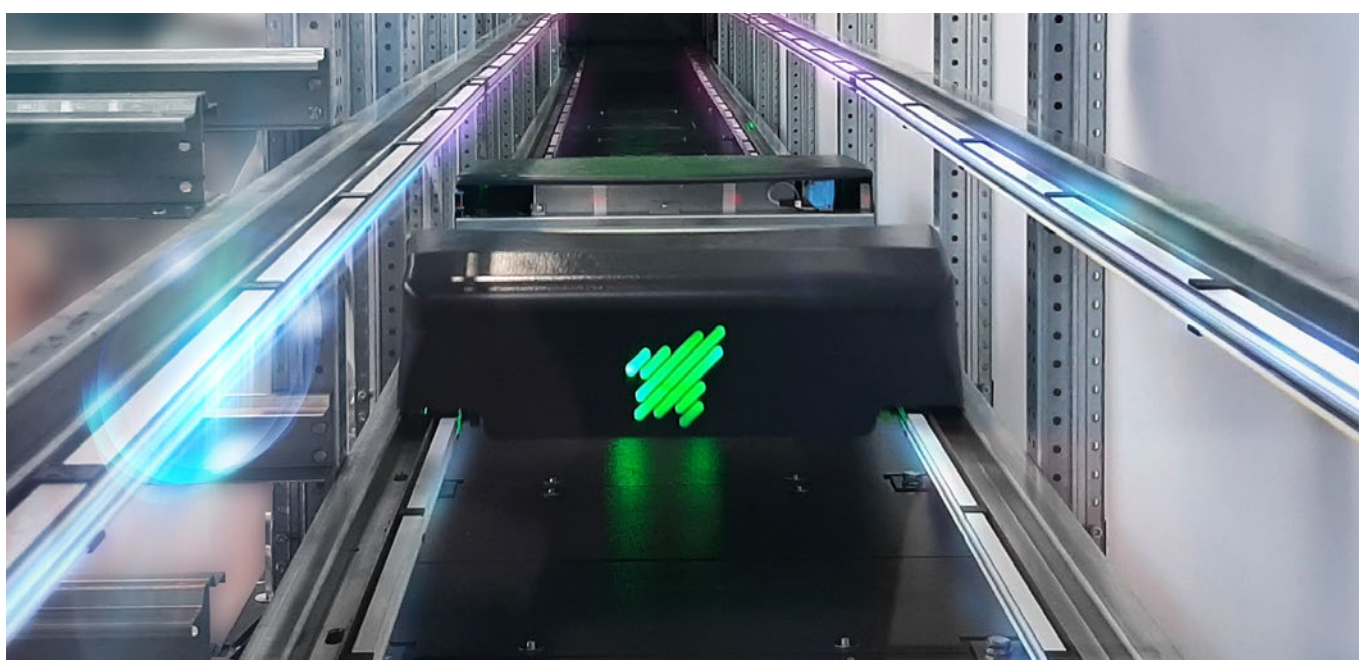
ENERGY TRANSMISSION

VCL: Compact and modular

The VCL is a truly versatile solution. The modular design allows it to be used in almost all track-guided vehicle systems.

Highlights

- Modular system for universal solutions
- Quick and easy installation thanks to plug-in and clamping technology on all standard upright profiles
- Extremely compact design enables installation even within a shuttle profile
- Wide power range from 40 to 100 amps and 12 to 500 volts
- Variable number of poles





STRONG AND RELIABLE

ELECTRIC MONORAIL SYSTEMS ALWAYS IN MOTION

Reliable solutions for production lines

Electric monorail systems play a key role in many production lines. They are used to transport materials quickly and efficiently from one staging area to the next without affecting the working and movement areas on the floor.

The high flexibility and adaptability of the hangers make electric monorail systems a proven conveyor system that can cover large distances across different industries. VAHLE solutions form the optimum system for energy transmission, secure data communication, positioning and control.

Challenges

- Difficult maintenance and commissioning due to limited installation and maintenance slots
- Security standards increasingly relevant
- Increased efficiency and performance due to increasing throughput volumes
- Need for adaptability and flexibility of systems due to a wide range of diverse application requirements



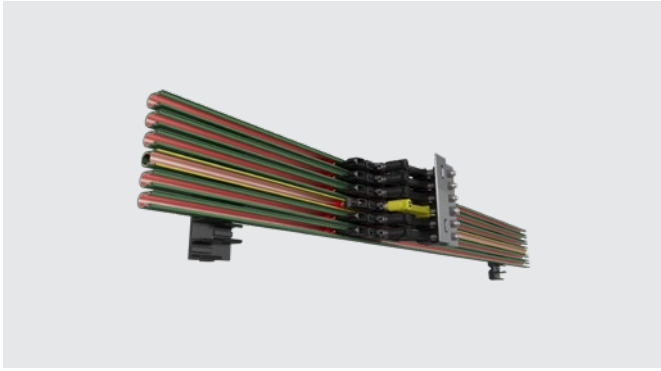
DATA TRANSMISSION

SMGM: Safe and reliable

The SMGM enables interference-free data transmission through communication in a protected aluminum profile, the so-called slotted waveguide. Any external interference or interference from other communication systems is excluded.

Highlights

- No interference to and from other radio/WLAN systems
- High transmission rate up to 100 Mbit/s
- Compatible with PROFINET and PROFI-safe
- Fast commissioning (no parameterization)



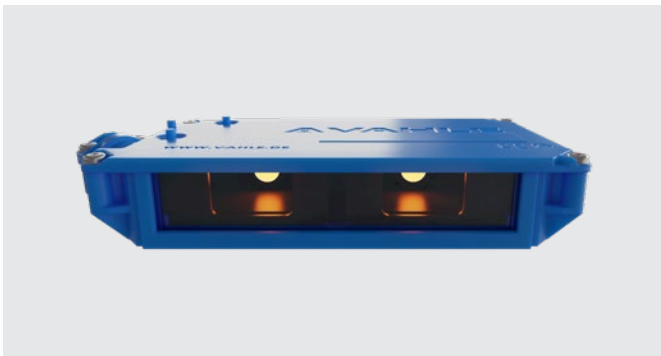
ENERGY TRANSMISSION

U10: Durable and system-compatible

The insulated conductor rail U10 can be combined with our solutions for data transmission, positioning and control to create an intelligent overall system. Its reliability and adaptability make it a popular choice in the intralogistics industry. U10 systems can be adapted to almost any track layout, which significantly expands their range of applications.

Highlights

- Compact design for integration into an EMS profile
- Various combinations and mounting solutions
- Individually adaptable to your application
- Safe due to reverse polarity protected earth conductor



POSITIONING

APOS Optic: Simple and precise

APOS Optic can position automatically controlled systems with millimeter precision at any time. The simultaneous detection of several code fields means that gaps of 40 mm can be reliably covered.

Highlights

- Simple implementation of positioning systems
- Exact positioning with millimeter precision
- Absolute positions even after voltage drop or system restart



ENERGY TRANSMISSION

CPS140: Wear free

CPS140 is compact and powerful at the same time. The "140" stands for the frequency in kilohertz and guarantees state-of-the-art development. This inductive technology impresses with its high power density and simple installation.

Highlights

- Low-maintenance and wear-free contactless system
- High power density with minimal design
- Tailor-made energy supply for EMS systems due to a selection of different pickups
- No limits on speed or acceleration
- High efficiency thanks to continuous development



CONTROL SYSTEM

VCSX: Flexible and modular

Thanks to the modular system, the VCSX bus rail system offers flexible application options and impressive convenience functions. The scalability of drive axis, sensors and safety functions can be individually adapted.

Highlights

- Simple configuration and easy handling thanks to PLC function block and integrated rail bus module
- Scalability for drive axis, sensors and safety functionalities
- Individual housing dimensions precisely tailored to your application



EFFICIENT AND POWERFUL

CUSTOMIZED TECHNOLOGIES FOR EVERY SORTER APPLICATION

A must-have for modern warehouses

In global distribution centers, the world turns 24/7. A wide variety of sorter applications bring goods and letters precisely to the right distribution point. Behind this smooth process there is a crucial factor: reliable energy transmission.

VAHLE products are designed to precisely meet the diverse requirements of sorter manufacturers, individually tailored to the needs of each application. Our energy and automation solutions guarantee a safe and efficient process.

Challenges

- Higher travel speeds due to increasing flow of goods
- Reduction of the available installation space
- Need to be maintenance-free for as long as possible
- 24/7 availability



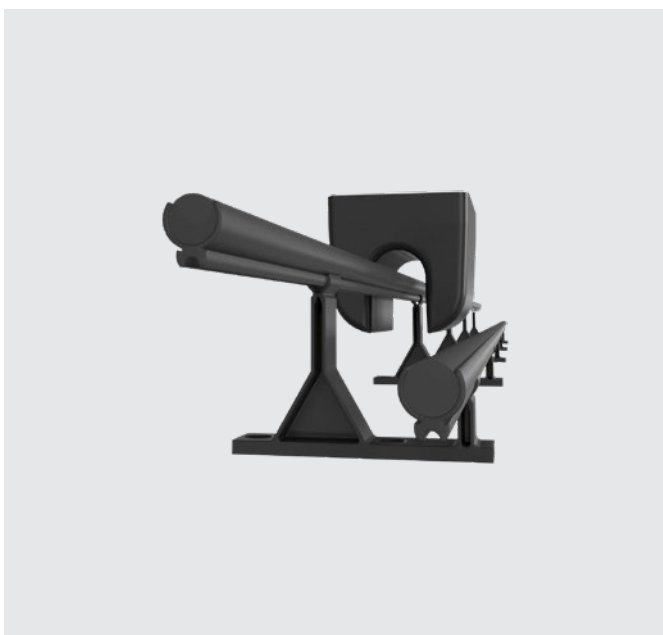
ENERGY TRANSMISSION

U20: Insulated energy transmission

The U20 is characterized by a solid copper profile, which ensures maximum wear resistance and resistance to external influences, especially in high-frequency applications. It guarantees reliable energy transmission for continuous movements in complex track layouts and efficient processes.

Highlights

- Extremely durable solid copper conductor cross section
- Extruded profile
- Also suitable for high power requirements
- Compact design



ENERGY TRANSMISSION

CPS140: Wear free energy transmission

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PRECISE AND LOW-MAINTENANCE

SYSTEMS FOR SKILLET LINES

Transport heavy loads easily and precisely

Skillet lines consist of several platforms arranged in a row, each of which is equipped with a lifting table. They are mainly used in the automotive industry. An efficient production process, especially in production lines, therefore requires a reliable power supply for the lifting tables as well as safe control options.

Our systems guarantee optimum performance, even in limited space. In addition to energy transmission, our flexible and low-maintenance solutions for positioning, data transmission and control offer a significant advantage.

Challenges

- High level of personal and system safety required
- Small installation spaces within the systems
- 24/7 availability
- Different performance requirements due to the variety of vehicles produced



DATA TRANSMISSION

SMGM: Safe and reliable

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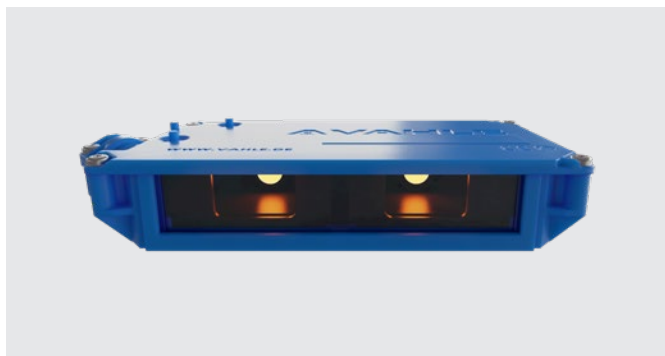
ENERGY TRANSMISSION

VKS: Compact and durable

The VKS was specially developed for limited installation spaces and offers space for up to six poles. This allows the system to transmit control currents and other signals in addition to the drive power. The compact conductor system proves to be extremely reliable even under very dirty conditions or extreme temperatures.

Highlights

- Ultra-flat multipole design for minimal installation space
- Extremely low maintenance
- Safe due to special protective conductor
- Simple installation in combination with the VMT support profile



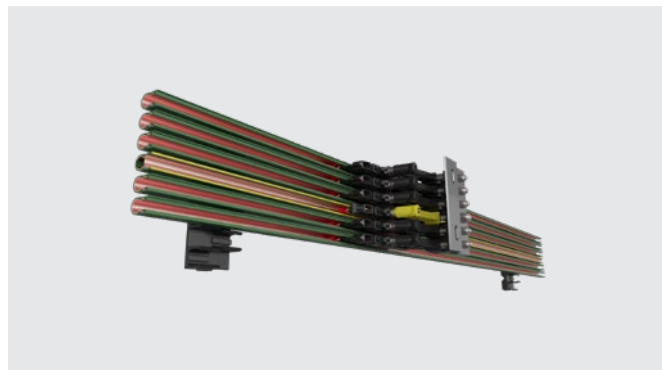
POSITIONING

APOS Optic: Simple and precise

APOS Optic can position automatically controlled systems with millimeter precision at any time. The simultaneous detection of several code fields means that gaps of 40 mm can be reliably covered.

Highlights

- Simple implementation of positioning systems
- Exact positioning with millimeter precision
- Absolute positions even after voltage drop or system restart



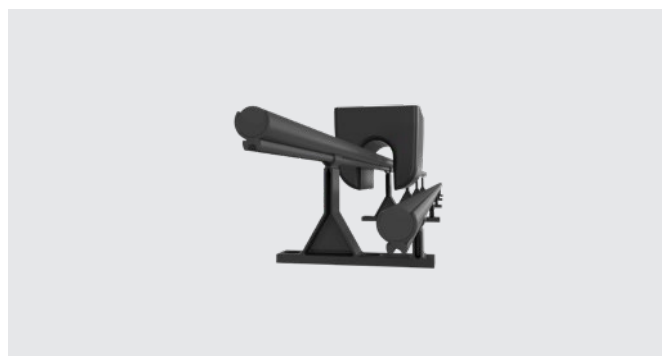
ENERGY TRANSMISSION

U10: Compact and long-lasting

The insulated conductor system U10 can be combined with our solutions for data transmission, positioning and control to create an intelligent overall system. Their reliability and adaptability make them a popular choice in intralogistics. U10 systems can be adapted to almost any track layout, which significantly expands their range of applications.

Highlights

- Compact design for implementation in an EMS profile
- Various combinations and mounting solutions
- Individually adaptable to your application
- Safe due to reverse polarity protected ground conductor



ENERGY TRANSMISSION

CPS140: Wear free

CPS140 is compact and powerful at the same time. The "140" stands for the frequency in kilohertz and guarantees state-of-the-art development. This inductive technology impresses with its high power density and simple installation.

Highlights

- Low-maintenance and wear-free contactless system
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FAST AND ACCURATE POSITIONING

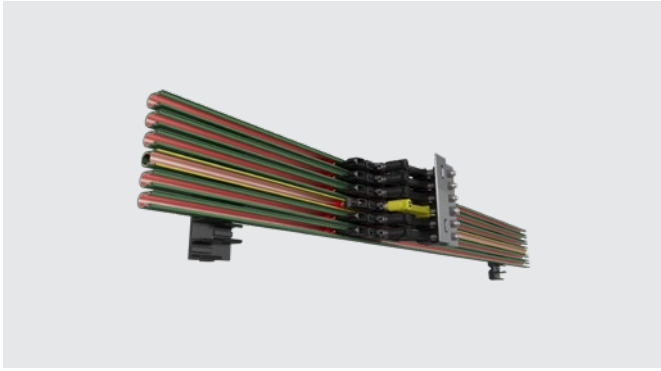
INNOVATIVE TECHNOLOGY FOR ELECTRIC PALLET SYSTEMS

Reliable freight transportation

Whether for the simple transport of palletized goods or the implementation of sophisticated, automated assembly processes – at VAHLE you will find a comprehensive selection of tailor-made technologies for electric pallet systems. Our products are characterized by easy installation, optimal space utilization and high performance to make your process efficient and smooth. Discover the variety of our application solutions for electric pallet conveyors.

Challenges

- Material flow requires efficient route planning
- High level of personal and plant safety required
- High demands on efficiency and goods throughput
- Criterion No. 1: Reliability and availability



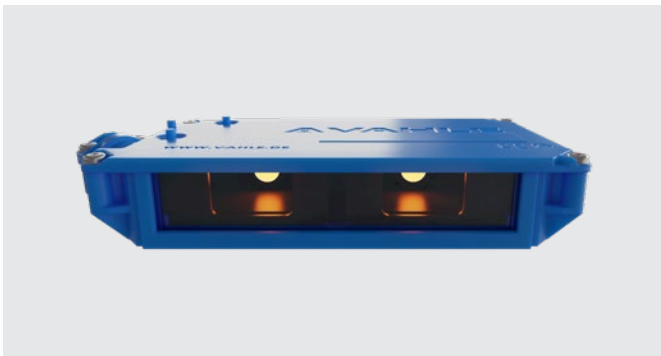
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EFFICIENT AND FLEXIBLE

ENERGY FOR AUTOMATED GUIDED VEHICLES

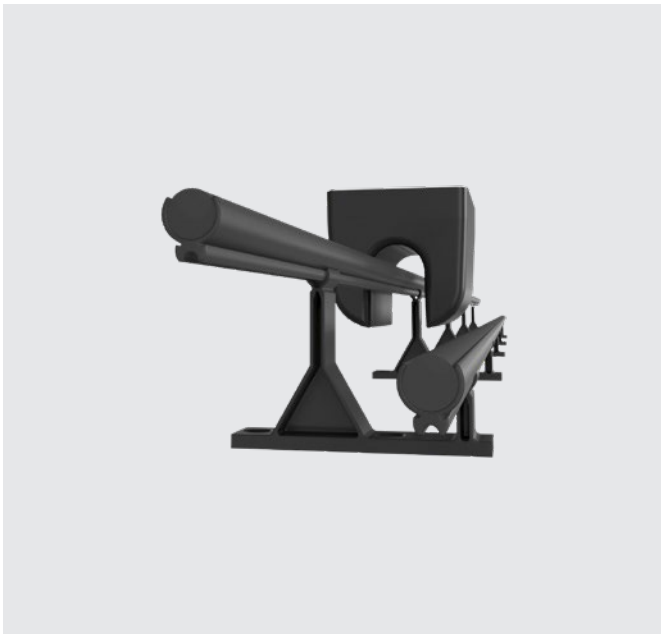
Flexibility has a name

Automated guided vehicles and robots have become an essential part of manufacturing and supply chain processes. Flexibility in handling and process individualization are requirements for a sustainable industry. This newly gained flexibility must be guaranteed by a safe and efficient energy supply in order to enable autonomous transportation.

With our wide range of energy transmission systems, we guarantee the optimum solution for your application, always tailored to your individual requirements. Whether via robust charging contacts or our contactless CPS solutions, which enable a continuous energy supply.

Challenges

- Highly dynamic development cycles for energy storage technologies
- Demand for flexibility
- Persistent lack of resources
- Limited construction and space resources
- "Same-day" delivery



ENERGY TRANSMISSION

CPS140: Permanent energy in a minimum of space

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ENERGY TRANSMISSION

Charging contacts: Extremely robust solution

VAHLE is a pioneer in charging contacts and offers the world's largest standard range. The solutions are extremely wear-resistant, durable and of course also available fully customized.

Highlights

- Can be used for power, data and signal transmission
- Robust thanks to specially developed, highly wear-resistant system components
- Application-specific solutions tailored to your needs
- For point-to-point charging capacities up to 1000 A



EFFICIENT AND INDIVIDUAL

E-FORKLIFT FLEET, PERFECTLY LOADED

The optimum energy supply for every application

Electric forklifts that are autonomous and in continuous use offer maximum efficiency. They are particularly essential in enclosed spaces, where exhaust emissions and noise are a challenge.

Short charging cycles and 24/7 availability are crucial. However, the use of the highest quality energy transfer solutions is essential for these requirements. Whether inductive energy transmission or the proven classic, the charging contact - VAHLE offers you the optimum solution, individually tailored to your needs.

Challenges

- Maximum availability with limited range
- Fast-charging storage technologies require more efficient charging processes
- Space constraints require compact sizes



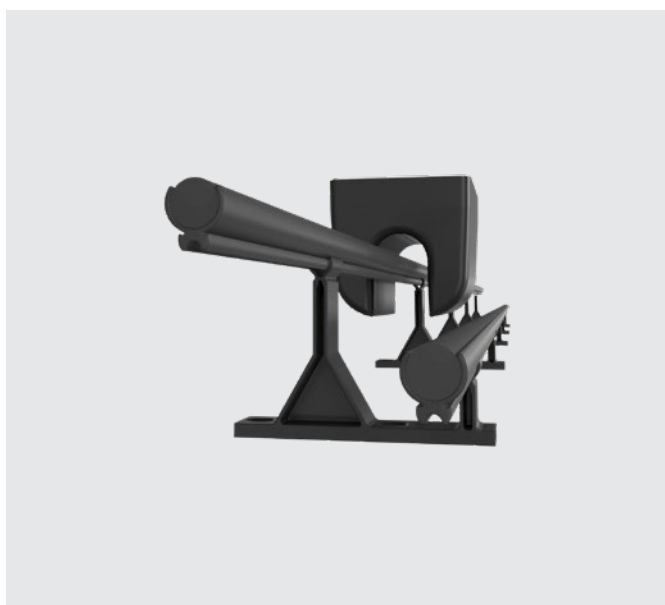
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SMART COLLECTOR

PREDICTIVE MAINTENANCE FOR CONDUCTOR SYSTEMS





UNPLANNED SYSTEM FAILURES HAVE UNWELCOME CONSEQUENCES

In production lines, unforeseen errors can bring production to a stop. The results are often high costs that can reach unimagined heights if the troubleshooting process is complex and time-consuming.

Such scenarios as well as maintenance and service operations are now solved with the Smart Collector. As the world's first intelligent current collector, it records movement data and thermal information via special sensors and forwards it to the main unit. The data is evaluated there in order to monitor the system during operation and report any anomalies.

Take advantage of our Smart Collector - the unique predictive maintenance tool for conductor systems. We make your application predictive.

Available for the following applications:

- Electric monorail systems
- Electric pallet systems
- Skillet lines
- Sorter

Highlights

- Early detection of the smallest changes
- Continuous temperature measurement to protect against hotspots
- Processing and evaluation of the measurement data using the IDAA method (Intelligent Dynamic Anomaly Analysis)
- Simple implementation thanks to plug-and-play
- Uncomplicated installation without structural changes, even in existing systems

Benefits

- Data analysis for predictive maintenance
- Minimizing unplanned downtimes and increasing process reliability
- Increasing the productivity of the entire system
- Optimally schedule maintenance cycles
- Reduce storage and maintenance costs

Find out more at:

smartcollector.vahle.de



OUR MISSION: YOUR SMOOTH OPERATION

SERVICE AND SUPPORT FROM A SINGLE SOURCE

VAHLE offers a comprehensive range of service and support services from a single source. Our services include project management, installation, supervision and commissioning, maintenance and repair as well as detailed consulting and training. Our aim is to be by your side every step of the way to ensure that your requirements are met and your expectations are exceeded.

PROJECT MANAGEMENT

Overall responsibility as general contractor

- Wide range of pre- and after-sales services
- Function as a system supplier or project manager as a general contractor
- Organization of the necessary sub-projects including budgeting and complete cost control
- Proactive communication on progress, schedule and implementation periods
- Certified controlling of the entire project in accordance with ISO 45001

INSTALLATION AND COMMISSIONING

Certified specialists on site at your facility

- Installation of VAHLE components, including new systems, extensions or retrofits
- Large service team including external partners
- Electrical connection according to official regulations
- Overall responsibility for installation and commissioning possible
- Handover of the ready-to-use turnkey system
- Certified personnel available for supervision and start-up support

MAINTENANCE AND REPAIR

Smooth operation of your system

- One-time or periodic maintenance contracts
- Global repair management of electronic products
- Material thickness measurement of the copper conductors of conductor systems
- Camera inspections for testing enclosed conductor systems
- Level measurement for slotted microwave guide
- Cleaning of conductor systems
- Installation of software updates as part of release management

TRAININGS

Professional handling of our products

- Qualification of external persons for maintenance and repair work
- Basic training: Basic training including theoretical and practical test
- Advanced training: Examination to become a supervisor after working on a system five times under supervision
- Application training: teaching of additional knowledge

YOUR PARTNER FOR SMOOTH PROCESSES

VAHLE SERVICE & AFTERSALES: YOUR PARTNER FOR SMOOTH PROCESSES

Whether sorter, electric monorail systems, skilnet lines or automated guided vehicles – regular maintenance, professional cleaning, and precise inspection ensure reliable and future-proof intralogistics. With preventative and predictive service, seamless spare parts supply, and our protect programs, we keep your systems efficient, safe, and consistently powerful.



Schedule a System Check now!

Simply scan the QR code or visit vahle.com/globalservice



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Only the technical data in the operating instructions and design drawings is binding.

Errors and technical changes excepted.

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