



# VAHLE SOLUTIONS FOR CONVEYING TECHNOLOGY



YOUR VISION – OUR SOLUTION



## INTRALOGISTICS

The increase in online sales and the resulting increase in shipping volume constantly pose new challenges for modern intralogistics.

Material and goods flows are subject to a growing degree of automation. Rising throughput volume and an increasing variety of items require the automation of high-bay warehouses and goods distribution systems in a minimum of space.

VAHLE systems, with their compact design and suitability for high traversing speeds, live up to these requirements.



## AUTOMOTIVE

Modern production plants are characterised by their versatility, resource efficiency, ergonomic design, and the integration of customers and business partners in the value chain. The production process is designed for maximum flexibility.

The VAHLE Group meets the challenges of increasing digitalization with a concept consisting of power transmission, data transmission, positioning and control systems. This combination enables you to optimize your production processes and costs for batch size 1 on the basis of the production costs of a comparable mass production product.

VAHLE thus combines the traditional energy transmission of today with the innovative technologies of tomorrow.

# SOLUTIONS



**INSULATED  
CONDUCTOR RAILS**



**CHARGING CONTACTS**



**COMPACT  
CONDUCTOR LINES**



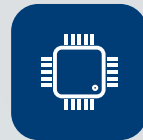
**DATA TRANSMISSION**



**CONTACTLESS  
POWER SUPPLY**



**POSITIONING**



**CONTROL SYSTEMS**



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RETRIEVAL MACHINES**

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# VAHLE SOLUTIONS FOR CONVEYING TECHNOLOGY





# AUTOMATED STORAGE AND RETRIEVAL MACHINES

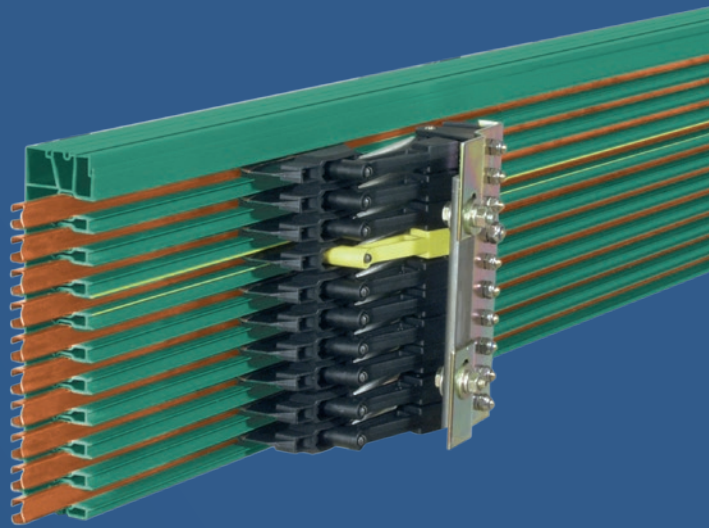
## SPACE-SAVING AND POWERFUL SOLUTIONS FOR YOUR HIGH-BAY WAREHOUSE

Automated stacker cranes (AS/RS) require fast, reliable and compact conductor rail systems for optimum performance. VAHLE's vCONDUCTOR product range includes many solutions that are specially tailored to the requirements of common warehouse applications. VAHLE provides a future-oriented technology from the field of non-contact energy transmission vPOWER. vPOS positioning systems round off the overall system for your storage and retrieval machines.

### CHALLENGES

- Increasing throughput volumes require maximum performance.
- The traversing speeds of AS/RS are constantly increasing.
- Due to the increasing variety of articles, less and less space is available for the AS/RS.
- 24/7 availability does not allow for long downtimes.
- Extreme environmental conditions, e.g. in deep-freeze warehouses (down to  $-30^{\circ}\text{C}$ ).





## SOLUTIONS



### COMPACT DESIGN

for minimum installation space

### EASY INSTALLATION

Hanger distances of up to 4.5 m,  
therefore no additional support structures are necessary

### MULTI-FUNCTIONAL

up to 10 poles, also for transmission of control currents



### SIMPLE

simple implementation of positioning systems

### PRECISE

millimetre-precise positioning

### PROCESS RELIABILITY

absolute positions even after voltage drop or restart  
of the system



### SAFE

no interference to and from other wireless/WLAN systems (HF-proof)

### HIGH TRANSMISSION RATE

up to 100 Mbit/s | fast & consistent cycle time | PROFI-safe

### FAST COMMISSIONING

Plug & Play (no parametrisation)





## AUTOMATED GUIDED VEHICLES

### EFFICIENT ENERGY TRANSMISSION FOR DRIVERLESS MATERIAL TRANSPORT

Automated guided vehicles (AGVs) are becoming increasingly important in the age of industry 4.0. AGVs can be used in many markets to ensure the transport and handling of goods of all kinds. With a large portfolio of charging contacts from the vCONDUCTOR product range, you will find an efficient and cost-effective solution for your system. The continuous electrification of AGVs without energy storage can also be realised without any problems thanks to the non-contact solutions (vPOWER).

#### CHALLENGES

- New storage technologies require efficient charging.
- The booming online trade requires that AGVs can be easily adapted to the modified tasks in production and logistics.
- Increasingly small installation spaces require compact sizes.







## SOLUTIONS



### **MULTI-FUNCTIONAL**

can be used for charging current, data and signal transmission

### **ROBUST**

due to specially developed, highly wear-resistant system components

### **CUSTOMIZED**

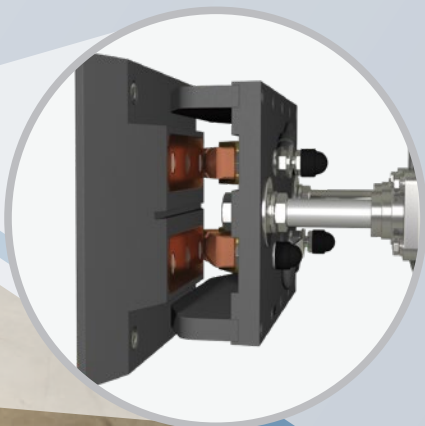
providing application-specific solutions

### **HIGH-EFFICIENCY**

thanks to continual development

### **EXTENSIVE STANDARD PORTFOLIO**

tailored to your needs



### **COMPACT DESIGN**

for minimal installation area

### **MAINTENANCE-FREE**

no wearing parts

### **NO LIMITS**

for speed or acceleration

### **HIGH-EFFICIENCY**

thanks to continual development

### **LARGE SELECTION**

of pick-ups, customized for your needs



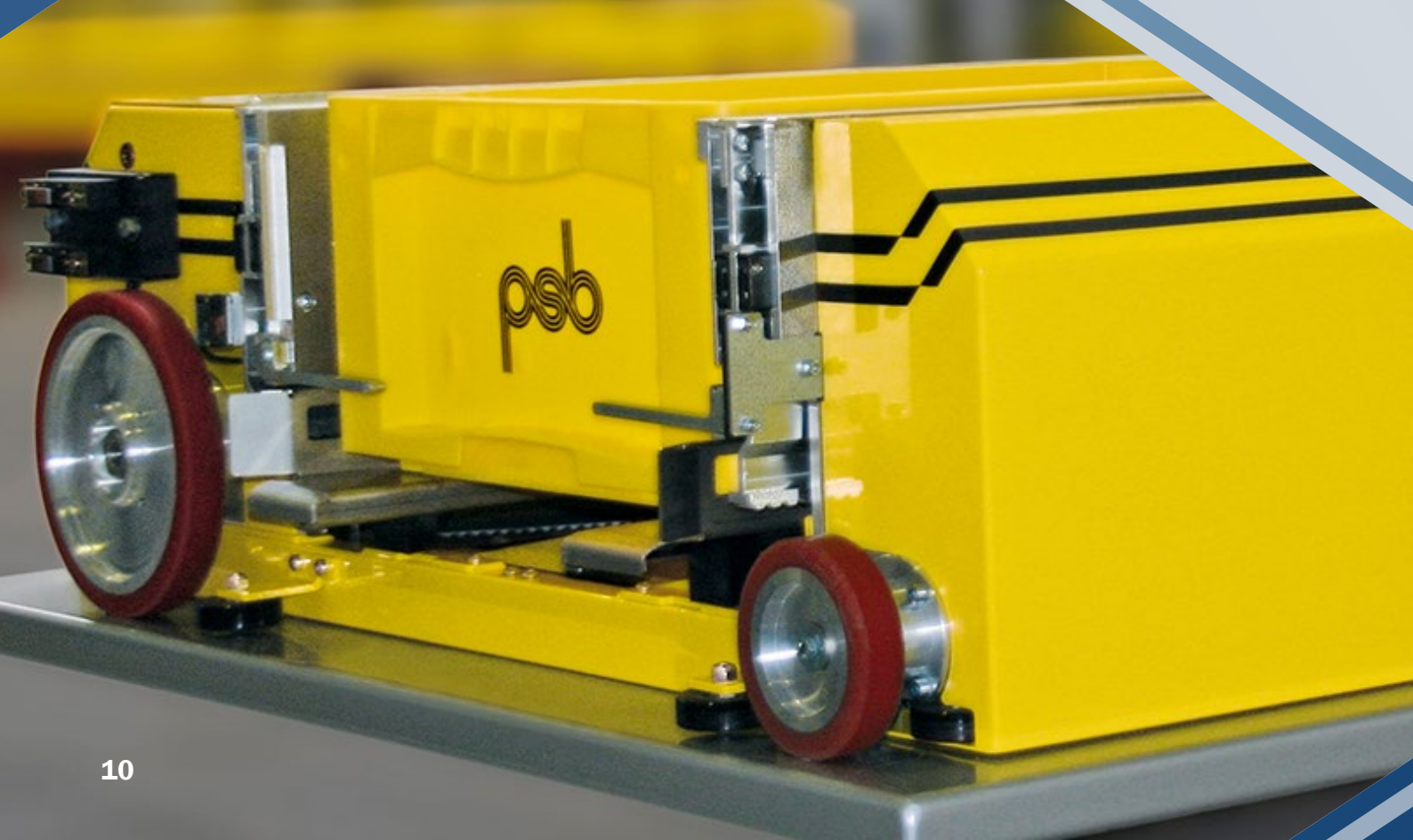
## SHUTTLE

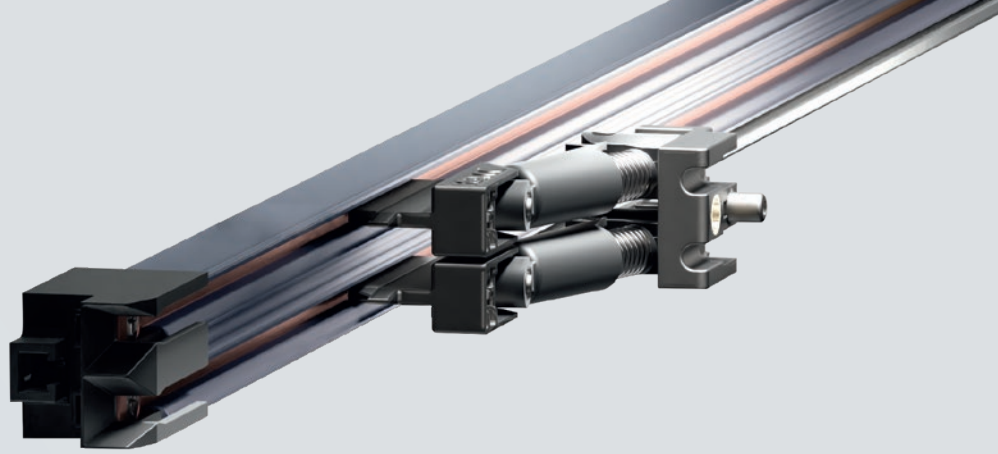
### ULTRA-COMPACT ENERGY POWER SUPPLY WITHOUT LIMITS

Shuttle systems enable extremely fast transport of materials and goods with fast access times. Leading manufacturers of shuttle systems need specific solutions to meet these requirements. VAHLE offers various vCONDUCTOR and vPOWER solutions designed for the high speeds and intensive usage cycles of shuttle systems.

### CHALLENGES

- Increasing throughput volumes require maximum performance.
- The traversing speeds of AS/RSs are constantly increasing.
- Systems must integrate into the existing profile.





## SOLUTION



### ULTRA-COMPACT DESIGN

for implementation in your shuttle profile

### EASY INSTALLATION

safe and quick installation with few components



### INDIVIDUALLY

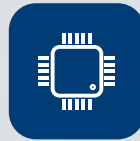
adaptable for your application

### NO LIMITS

also suitable for highly dynamic high-speed applications

### THE ELECTRICITY FILLING STATION

optimized for fast charging of Ultra-/Supercaps



### VARIABLE

wide range of power output stages for every electrified conveying application

### HANDLING

open and transparent operation/parametrisation



### COMPACT DESIGN

for minimal installation area

### MAINTENANCE-FREE

no wearing parts

### NO LIMITS

for speed or acceleration



### COMPACT DESIGN

for the smallest possible installation area

### SECURE

no interference to and from other wireless/WLAN systems (HF-proof)

### HIGH TRANSMISSION RATE

up to 100 Mbit/s | fast & consistent cycle time | PROFIsafe

### FAST COMMISSIONING

Plug & Play (no parametrisation)





# ELECTRIC MONORAIL SYSTEMS

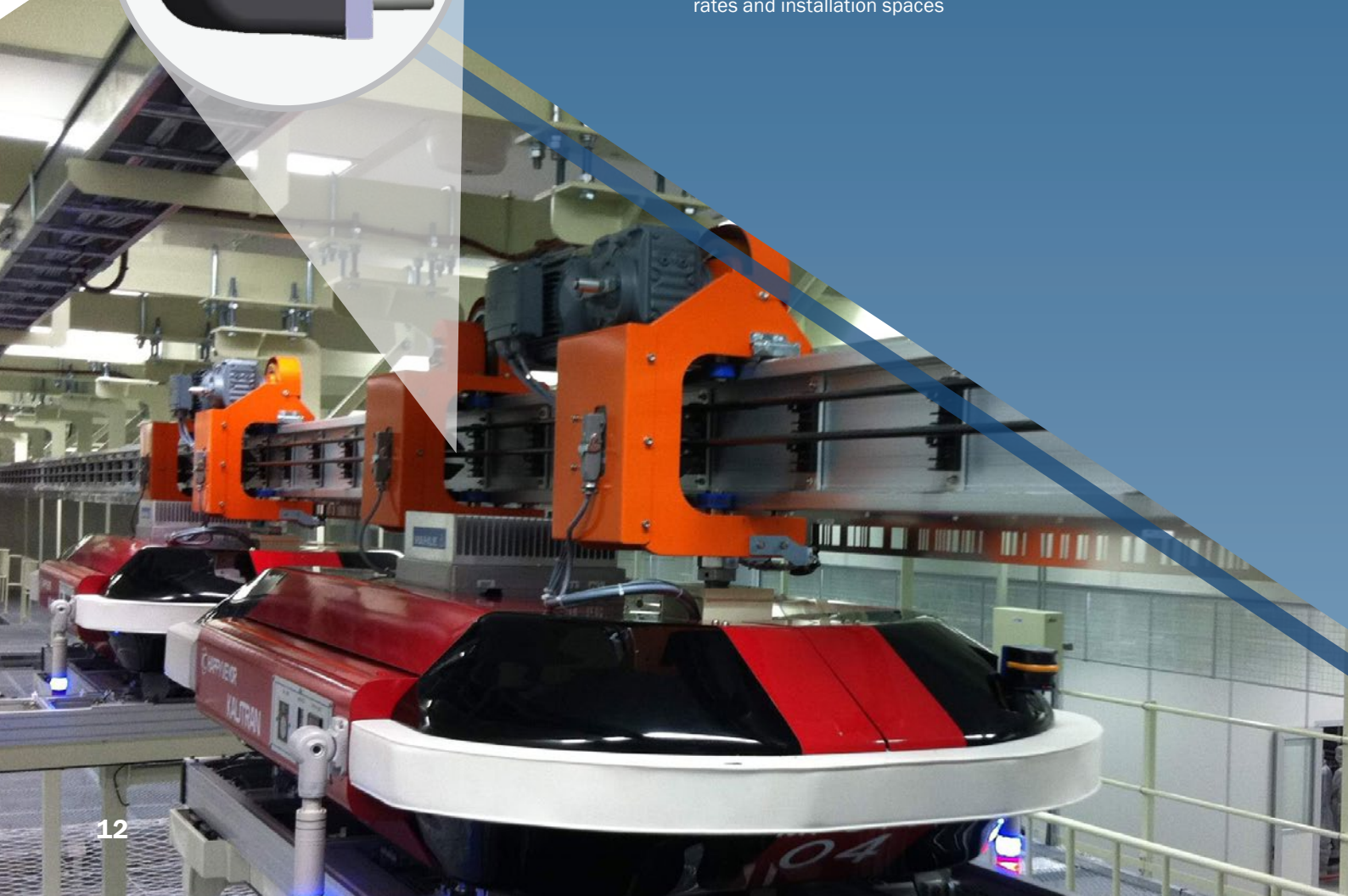
## SYSTEM SOLUTION FROM A SINGLE SOURCE

Electric monorail systems (EMS) are often used in material handling centres to quickly transport large quantities of materials & goods from one staging area to the next. For this, the EMS not only needs the power, but also a positioning, communication and control solution that can be perfectly combined.



### CHALLENGES

- Increasing demands on the vehicles of an EMS.
- Quick and easy assembly of the components.
- No additional support structures apart from the EMS profile.
- Increasing relevance of security according to legal protection guidelines.
- Conscious production – sustainability of investments require flexible retrofit products.
- Wide range of diverse requirements for loads, vehicles, data rates and installation spaces



## SOLUTIONS



### COMPACT DESIGN

for implementation in an EMS profile

### VARIABLE

diverse combinations and fastening solutions

### INDIVIDUALLY

adaptable for your application

### SAFE

due to polarised protective conductor



### COMPACT DESIGN

for minimal installation area

### MAINTENANCE-FREE

no wearing parts

### NO LIMITS

for speed or acceleration



### SIMPLE

simple implementation of positioning systems

### PRECISE

millimetre-precise positioning

### PROCESS RELIABILITY

absolute positions even after voltage drop or restart of the system



### COMPACT DESIGN

for implementation in your shuttle profile

### SAFE

no faults to and from other wireless/WLAN systems (HF-proof)

### HIGH TRANSMISSION RATE

up to 100 Mbit/s | fast & consistent cycle time | PROFI-safe

### FAST COMMISSIONING

Plug & Play (no parametrisation)

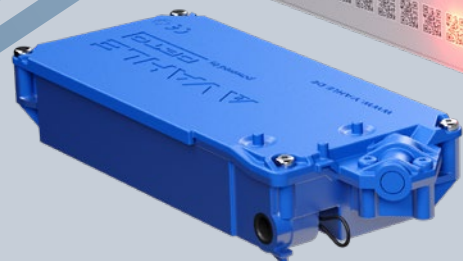


### VARIABLE

wide range of power output stages for every electrified conveying application

### HANDLING

open and transparent operation/parametrisation





## **SORTER**

### **HIGH-SPEED ELECTRIFICATION**

In constantly expanding storage and distribution centres, extensive sorting systems are implemented to cope with high volumes around the clock. As the speed and complexity of these systems increases, reliable electrification becomes more and more important to ensure maximum performance. The VAHLE product range of traditional vCONDUCTOR and advanced contactless vPOWER systems meets these requirements.

#### **CHALLENGES**

- Higher travel speeds due to increasing flow of goods
- Need for maximum maintenance-free time
- Same-day deliveries





## SOLUTIONS



### **DURABLE**

due to massive solid-copper rails

### **COMPACT DESIGN**

for implementation in the sorter

### **VARIABLE**

diverse combinations and  
fastening solutions

### **INDIVIDUALLY**

adaptable for your application



### **COMPACT DESIGN**

for minimal installation area

### **MAINTENANCE-FREE**

no wearing parts

### **NO LIMITS**

for speed or acceleration



# SKILLET

## LOW-MAINTENANCE SYSTEMS FOR YOUR THRUST PLATFORM

Skid-slide systems consist of several skid-slide platforms that are positioned next to each other. On each of these platforms there is a lift table which must be supplied with energy. The VAHLE systems from the vCONDUCTOR and VPOWER ranges offer an optimum solution here, especially where space is limited. In addition to power transmission, we also offer particularly robust, flexible and low-maintenance solutions for positioning, data transmission and control.

### CHALLENGES

- Secure positioning and data transmission for personal safety.
- Less installation space – low-maintenance systems required.
- Variety of produced vehicles require different performance requirements.

### SOLUTIONS



#### COMPACT DESIGN

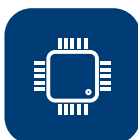
for minimal installation area

#### MAINTENANCE-FREE

no wearing parts

#### NO LIMITS

for speed or acceleration



#### VARIABLE

wide range of power output stages for every electrified conveying application

#### HANDLING

open and transparent operation/parametrisation



#### COMPACT DESIGN

for minimal installation area

#### VARIABLE

suitable for large path tolerances

#### SAFE

due to special protective conductor



#### SIMPLE

simple implementation of positioning systems

#### PRECISE

millimetre-precise positioning

#### PROCESS RELIABILITY

absolute positions even after voltage drop or restart of the system



#### COMPACT DESIGN

for implementation in your shuttle profile

#### SAFE

no faults to and from other wireless/WLAN systems (HF-proof)

#### HIGH TRANSMISSION RATE

up to 100 Mbit/s | fast & consistent cycle time | PROFIsafe

#### FAST COMMISSIONING

Plug & Play (no parametrisation)







# ELECTRIC PALLET CONVEYOR

## FLEXIBLE SYSTEM SOLUTION FOR TRANSPORTING GOODS

Electric pallet conveyors (EPCs) are adapted for various tasks. From simple transport of pallet goods to complex automated installation procedures. For this, the EPCs not only need the power, but also a positioning, communication and control solution that can be perfectly combined.

### CHALLENGES

- Flexible adjustment to material flow
- Excellent positioning accuracy
- Very reliable thanks to proven, low-maintenance components
- Integrated data transmission

### SOLUTIONS



#### COMPACT DESIGN

for implementation in an EPB profile

#### VARIABLE

diverse combinations and fastening solutions

#### INDIVIDUALLY

adaptable for your application

#### SAFE

due to polarised protective conductor



#### COMPACT DESIGN

for minimal installation area

#### MAINTENANCE-FREE

no wearing parts

#### NO LIMITS

for speed or acceleration



#### SIMPLE

simple implementation of positioning systems

#### PRECISE

millimetre-precise positioning

#### PROCESS RELIABILITY

absolute positions even after voltage drop or restart of the system



#### COMPACT DESIGN

for implementation in your shuttle profile

#### SAFE

no faults to and from other wireless/WLAN systems (HF-proof)

#### HIGH TRANSMISSION RATE

up to 100 Mbit/s | fast & consistent cycle time | PROFI-safe

#### FAST COMMISSIONING

Plug & Play (no parametrisation)



#### VARIABLE

wide range of power output stages for every electrified conveying application

#### HANDLING

open and transparent operation/parametrisation



**VAHLE**

**VAHLE STANDS FOR TRADITION COMBINED  
WITH INNOVATION AND CUTTING EDGE TECH-  
NOLOGY**

- Safe and reliable products for over 100 years
- Leading technology and expertise worldwide
- Excellent customer service
- Power transmission, data transmission, positioning and controls from one provider



## SERVICE & SUPPORT

### CUSTOMIZED SOLUTIONS FOR YOUR APPLICATIONS

Our extensive product portfolio is expanded by a comprehensive range of services which are specially tailored to your requirements:

- Project management
- Commissioning
- Engineering + Customizing
- Installation & Installation monitoring
- After Sales Service
- Product training courses
- Maintenance packages

We enjoy using our know-how to develop specific solutions for your business. Call us and make an appointment to learn more about VAHLE systems and services.



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