



AMUSEMENT & ENTERTAINMENT



SOLUTIONS & SERVICES
FOR ELECTRIFICATION,
POSITIONING &
DATA COMMUNICATION



MAKE YOUR FUN SMARTER

INTELLIGENT SOLUTIONS FOR THE AMUSEMENT INDUSTRY

The amusement industry is competitive, fast-paced and constantly evolving. With the increasing demands for safety, interactivity and creativity driving companies towards more dynamic and innovative rides, the amusement industry needs the right partners to make these rides a reality. Real time vehicle positioning, monitoring and communication are a necessity to seamlessly create immersive experiences for park guests. To achieve this, VAHLE provides unique and proven solutions for the amusement industry, such as our vPOS absolute positioning systems and vCOM data communication systems. These solutions provide ride manufacturers with positioning accurate to $\pm 1\text{mm}$ and real time data transmission, including video, up to 100 mbps. In addition, these items can be fully integrated with VAHLE's electrification products and offered with design, installation and after sales support to provide a complete turnkey solution.

INTEGRATED SOLUTIONS

To bring immersive and interactive amusement experiences to life, power, positioning and data solutions have to work together seamlessly to provide consistently smooth and reliable rides. VAHLE products integrate with one another to supply intelligent solutions to the complex requirements and challenges present in the today's markets' various applications.



SINGAPORE FLYER

ONGOING SUPPORT FOR THE LIFE OF YOUR PROJECT

From conceptualization to completion and beyond, VAHLE is proud to partner with you to meet your applications' requirements. With a wide range of services varying from installation and product training to routine maintenance and inspections, VAHLE provides comprehensive after-sale services to complement the full range of initial-sale support to ensure optimal satisfaction with your products.

SAFE & RELIABLE

Preventable faults take away from guest's immersive experience and ride downtime caused by mechanical error or failure dramatically affects the bottom line and reputation of today's leading amusement parks. VAHLE's engineered solutions provide your applications with the power they require without compromising on quality or safety standards. Our enclosed and unipole conductor bars feature a compact, touch-safe construction while offering repeatable performance in the conditions required by today's attractions. Our vPOS and vCOM solutions feature proven designs used in today's demanding applications. Within every VAHLE solution you will find over 100 years of innovation, passion and quality you can depend on.

YOUR VISION – OUR SOLUTION

YOUR VISION – OUR SOLUTION

vCONDUCTOR

PROVEN. SAFE. RELIABLE. ELECTRIFICATION.

CONDUCTOR SYSTEMS

Within every section of VAHLE conductor systems are over 100 years of engineering expertise and innovation. Over the last century, VAHLE has positioned itself as a global leader for safe and reliable electrification with conductor systems ranging from 100–1250 amps and charging contacts providing versatile power solutions for a wide array of applications.



ENCLOSED KEY FEATURES

- Up to 11 conductors internally
- Compact, multi-pole design
- Touch safe (IP23)
- Specialty sections & accessories available
- Up to 690 VAC & 300 amps available
- Curve sections available



UNIPOLE KEY FEATURES

- Any number of conductors as required
- Copper, steel and aluminum conductor material
- Compact, single pole construction
- Touch safe (IP23)
- Up to 1000 VAC & 1250 amps available
- Curve sections available



COMMON APPLICATIONS FOR vCONDUCTOR

- Roller coasters
- Canned rides
- Stadium roofs
- Dark rides
- Drop towers
- Train rides

ADVANTAGES OF USING vCONDUCTOR

- Curves and specialty sections available for electrifying complex tracks and custom applications
- Fully insulated and touch-safe housing to meet strict safety requirements
- Low maintenance requirements
- Enhanced design protects against environmental concerns

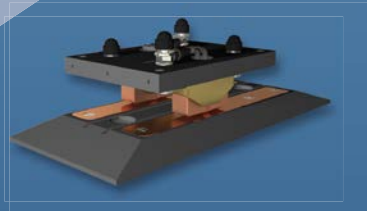
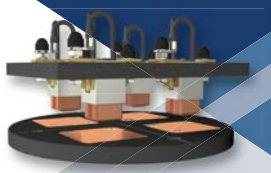
**DISCO COASTER
(MOVIE PARK GERMANY)**

vCONDUCTOR

ADAPTABLE CONTACTS FOR ANY APPLICATION

CHARGING CONTACTS

The development of powerful batteries, which allow for quick recharge within seconds, enables the integration of charging contacts into amusement applications without removing transport vehicles from the ride track. VAHLE has developed special battery charging contacts which fully meet any standard requirements or can be customized for your application.



KEY FEATURES

- Large variety of standard configurations
- 20-600 A
- 12-80 VDC
- Custom color & shape possible



vPOWER

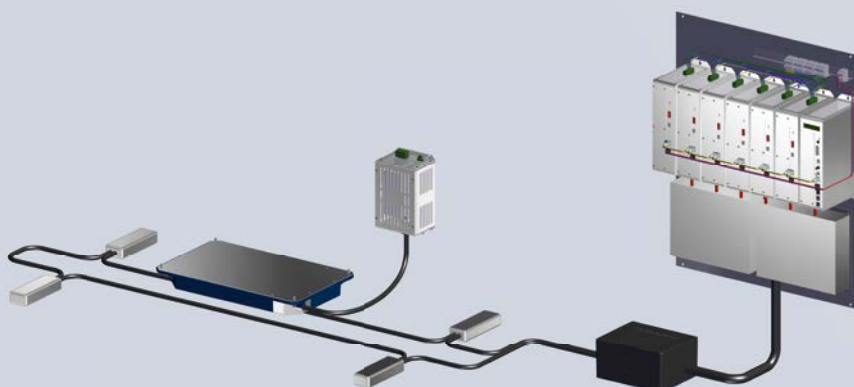
CONTACTLESS POWER FOR
CUSTOM APPLICATIONS

CONTACTLESS POWER SUPPLY

vPower is the next generation of contactless power supply developed by VAHLE. Utilizing a frequency of 140kHz and silicon carbide semiconductors - vPower offers a smaller size, lower cost and increased power density compared to standard contactless power solutions.

KEY FEATURES

- Wide range of pick up units to meet your power requirements
- No-wear components
- No limit on travel speed or acceleration





**EMPIRE OF THE PENGUIN RIDE
AT SEA WORLD ORLANDO**

**ADVANTAGES OF USING
CHARGING CONTACTS**

- Custom color & configurations available
- Durable, proven & compact design
- Reliable in difficult environmental conditions
- Modular & adaptable to any application

**COMMON APPLICATIONS
FOR CHARGING CONTACTS**

- Entry/Exit power supply in-station
- Battery or capacitor charging
- Lap bar-release contacts
- Safety interlocks in-station

ADVANTAGES OF USING vPOWER

- Maintenance-free
- High-efficiency thanks to continuing evolution of components
- Customizable solutions to meet theming and application requirements

**COMMON APPLICATIONS
FOR vPOWER**

- Battery or capacitor charging
- AGV based rides
- Track & station solutions



**AT&T STADIUM
ARLINGTON | TEXAS**

HARRY POTTER AND THE FORBIDDEN JOURNEY



vCOM

SECURE WIRELESS COMMUNICATION

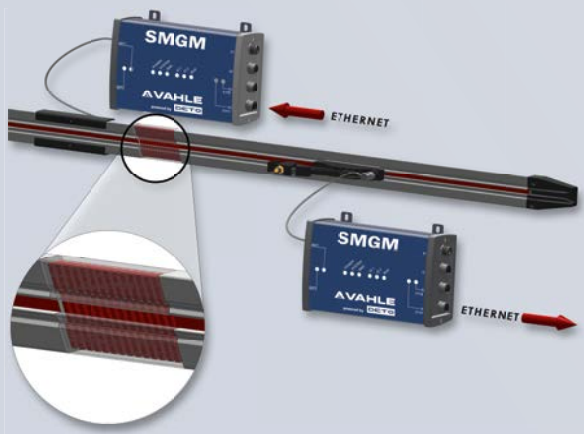
SLOTTED MICROWAVE GUIDE

Today's advanced attractions offer visitors a unique, interactive and unforgettable experience by combining state of the art electronics and life-like special effects as you travel along a path.

To achieve this, VAHLE's Slotted Microwave Guide (SMG) products offer secure wireless communication at data rates up to 100 mbps. Our vCOM products provide fully secure bi-directional transmissions, allowing for constant communication between vehicles and ride control.

ADVANTAGES OF vCOM

- Secure communication
- Integration with vPOS & vConductor
- High data rates



KEY FEATURES

- Data transfers of up to 100 mbps
- Bi-Directional communication
- Ethernet and other interfaces available
- Supports system lengths of up to 1 km



COMMON APPLICATIONS

FOR vCOM

- Dark rides
- Rides with video integrations
- Roller Coasters

vPOS

ENHANCED CONTROL WITH POSITIONING ACCURACY OF ± 1 MM

ABSOLUTE POSITIONING SYSTEM

Faster. Smarter. More Efficient. The amusement industry is evolving. Are you keeping up? Around the globe, companies are partnering with VAHLE to provide intelligent solutions to their processes, such as VAHLE's absolute positioning systems (APOS). Utilizing a standard or optical reading head paired with magnetic code strip or QR code tape, VAHLE's APOS systems provide real time positioning of ride vehicles as they travel the ride track with accuracy up to ± 1 mm.

Every VAHLE APOS system is available as a stand alone solution or seamlessly integrated with conductor bar and data communication systems.

KEY FEATURES

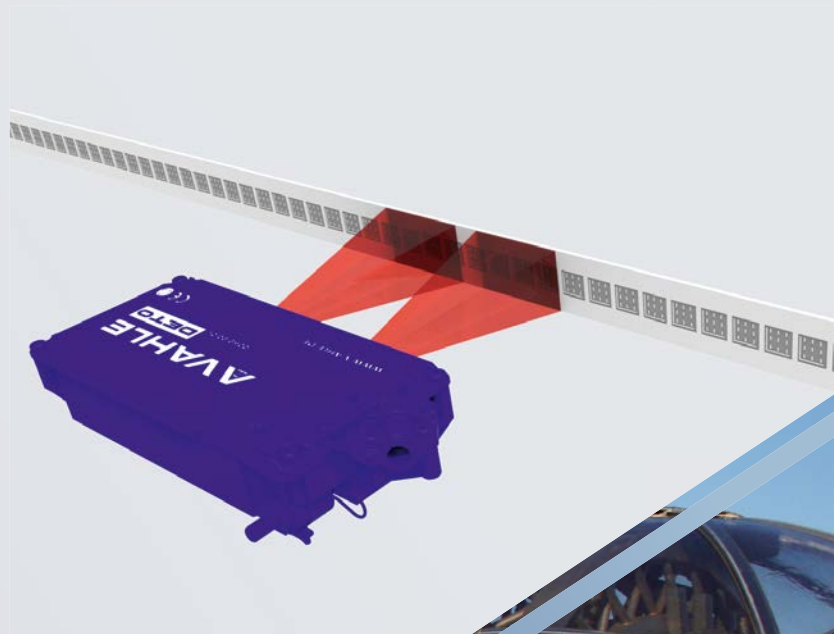
- 3 types available –
Magnetic, Optic & Contactless
- Curves possible
- Travel speeds up to 12 m/s
- Position determination down to ± 1 mm
- Dual camera design (Optic)
- IP 54 Rated

ADVANTAGES OF vPOS

- Unaffected by interruptions so vehicles can be removed from track and reinserted in a different position
- Real-time positioning allows ride designers full flexibility of their attraction
- Able to bridge gaps up to 40 mm (Optic)
- Reliable in difficult and dirty conditions
- Full integration with vConductor and vCom solutions

COMMON APPLICATIONS FOR vPOS

- Ferris wheels
- Dark rides



INCLINED ELEVATOR
A CORUÑA



VAHLE

COMBINING OVER 100 YEARS OF TRADITION WITH LEADING INNOVATION & TECHNOLOGY

Family owned since 1912, VAHLE is a world-leading manufacturer serving a broad range of industries and applications including amusement parks, automated manufacturing and processes, ports, and distribution centers. VAHLE provides solutions such as conductor systems for mobile electrification and positioning and data communication systems for advanced automation.

THE VAHLE DIFFERENCE

- Safe & reliable products with proven excellence for over 100 years
- World-leading technology and expertise
- Exceptional customer service from knowledgeable associates
- Complete and integrable solutions for power, data communication and positioning

YOUR VISION – OUR SOLUTION



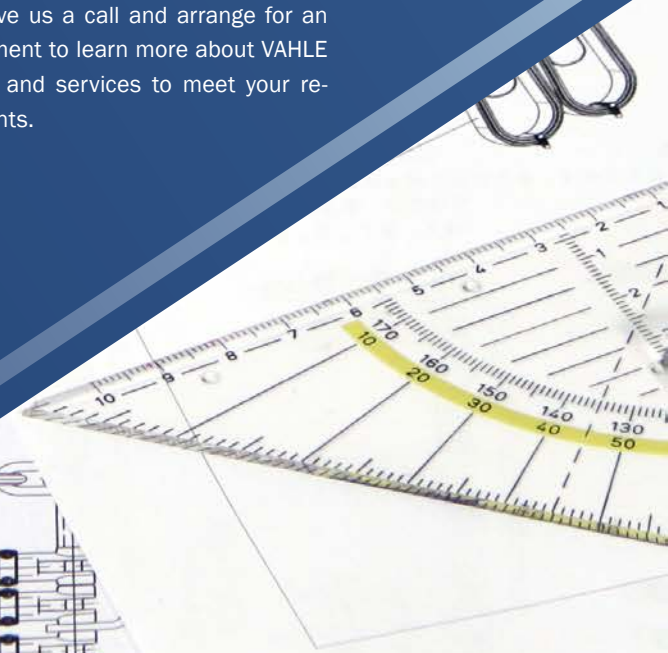
SERVICE & SUPPORT

WE DEVELOP TAILOR-MADE SOLUTIONS FOR YOUR APPLICATIONS

The successful range of VAHLE systems is complemented by a comprehensive range of services tailored to meet our customers' requirements, including

- System design
- Project management
- Commissioning
- Engineering
- Installation & installation supervising
- After-sales service
- Product training courses
- Maintenance packages

We will be glad to apply our expertise to develop specific solutions for your company. Give us a call and arrange for an appointment to learn more about VAHLE systems and services to meet your requirements.





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