Energy- and Data Transfer for Mobile Equipment

STEMMANN - TECHNIK

ENGLISCH
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From planning to production, all under one roof

STEMMANN-TECHNIK is one of the world's leading manufacturers of energy and data transfer components and systems in industrial and transport technology.

Drawing on our 100 years of engineering and practical research, we manufacture high quality products required all over the world, and create special, innovative, customised solutions.

A fundamental key to our success is our understanding of the importance of high quality in all areas of the company, ranging from customer-oriented advice to long-term service.

Every project and application is designed down to the finest detail, taking into account performance-related and economic aspects.

We guarantee high quality by upholding international standards and guidelines.

The quality management system implemented is based on standardised methods in conjunction with flexible structures for modelling and documenting all production and business processes.

STEMMANN-TECHNIK products and services aim to fulfill all our customers' requests, needs and expectations.
Our company was founded in Luxembourg in 1912 by engineer August Stemmann. At that time, we were already involved with producing power supplies for cranes at steel and smelting works as well as for other mobile machines. Slip ring assemblies for rotating machines and pantograph systems for railway vehicles were added later on.

We have been part of the Fandstan Electric Group since 1984 – a private holding company with subsidiaries in Great Britain, the Netherlands, Poland, France, China, India, Taiwan, the USA, Australia and Russia. The Fandstan Group’s main business fields include the development, production, start-up and sale of innovative solutions for transmitting energy, data and fluids for rotating/mobile machines.
Motorised and Spring-Driven Cable Reels

Cable reels are used to wind and unwind cables and hoses. They ensure mobile machines are permanently supplied with power, control data and media, e.g. hydraulic oil, coolant or compressed air.

We manufacture motorised and spring-driven cable reels for container bridges, harbour- and automobile cranes, open-cast mining machinery, environmental technology and many other areas of application. They are designed as cylindrical or spiral driving- and hoisting reels.

With their robust mechanisms and perfectly designed drive technology, our cable reels have proven their worth under the harshest conditions in everyday operations.
STEMMANN-TECHNIK has long-time experience in building and manufacturing transmission systems for energy and control data.

We produce important system components which regulate the direction of the cable guidance, reduce tractive forces and prevent mechanical wear and tear on the cable sheathing. They help make the entire cable reel system available, to ensure uninterrupted operations.

Like the cable reels, the transmission system is also manufactured largely based on the respective orders. Slip ring assemblies, contact units and data/signal technology are configured individually as per the requirements.

STEMMANN-TECHNIK produces specially designed cable reels for use in explosion-proof conditions, and is responsible for supplying all electricity to the motorised cable reel system, including control cabinets, control panels and special accessories.

These systems can be combined with spring-driven and motorised cable reels in an endless number of ways.
Reliably Transporting Power Supply Lines

The larger the sphere of activity of modern systems and machinery, the more critical the power supply for their motors and gears.

Our cable festoon systems take flexible energy- and power supply lines to exactly where they are needed, also over longer distances. Power lines, data lines or supply tubes with water, compressed air etc. can be transported over a pre-defined distance, if necessary several times in one system. Depending on the location, C-rails (profiled guide rails), iron girders or tension cords can be used as track for the trolleys.

The cable festoon systems are suitable both for indoor and outdoor areas. They are optimised for the specific purpose down to the finest detail.

We supply industrial workplaces, workshops and assembly halls, as well as large port cranes and transport systems all around the world with our cable festoon systems.
Depending on design, the systems can bear loads of up to 1000 kg per trolley. They usually have mechanical drives, e.g. the crane arm. Alternatively, we also offer motor-driven trolleys for higher dynamics, reaching speeds of up to 240 m/min.

An extensive range of accessories, including special running wheels, fastening materials, or materials for buffering the vehicles completes our product range. All components are solidly built and easy to assemble. Individual project planning is, of course, also possible.

We build lightweight or heavy-duty cable festoon systems (plastic or steel) with running wheels for C-rails, T-beams or tension cords. The choice of system depends on the respective site location, the type of cables to be transported, and their total weight.

**Cable festoon systems with tension cord**
are mainly used when an open area needs to be bridged, but the guide rails cannot be fitted to the ceiling or wall.

**Cable festoon systems for T-beams**
are specially designed for medium-sized and large cranes. They transport long power- and data lines or heavy duty hoses, with each trolley capable of bearing payloads of up to 1000 kg.

**Cable festoon system with C-rails**
are very versatile. For example, they are used on indoor cranes, in workshops or in outdoor areas to ensure power or media are transmitted flexibly.
Optimal power supply and uninterrupted data communication are the pillars of modern production. STEMMANN-TECHNIK conductor lines guarantee both, effectively and safely. Efficient work processes are often only be made possible by flexibly connected current collectors/data adapters along the rails.

Using solid components and sophisticated system technology, we ensure the right power is available at all times – precisely where it is needed. Data connections for computerised processes are permanently stable and remain uninterrupted.

Our conductor line systems also increase safety for people and the environment. Particularly when manually transporting power- and data lines within the work area is obstructive or even hazardous.

All conductor lines are planned by us as complete systems. We carry out the projects on site, including suspension, control cabinet and all other necessary components – even in underground conductor line- and cable conduits if necessary.

The design and quality of our conductor line systems guarantee easy assembly and low-maintenance operation.
An Overview of Conductor Line Systems

We manufacture conductor lines for all purposes, with closed or open structure, i.e. with or without protective insulation against manual contact. The design, material and number of poles can be varied depending on area of use and purpose, tailored to our customers’ requirements.

**Open conductor lines** are made for the heavy duty- and harbour industry. Robustly built and designed for high-voltage currents, they also work flawlessly in extreme environments/outdoor areas.

**Individually insulated conductor lines** are suitable for use in halls and workshops, as well as for outdoor systems. The extensive individual insulation of the conductive elements ensures totally reliable protection against hand contact (protection class IP 23).

**Small type conductor lines** are particularly distinguished by their easy-to-assemble structure and connection technology, enabling them to be expanded or modified at any time. They are also correspond to protection class IP 23.

SCL - Stemmann Conductor Line
Power- and Data Transmission for Rotating Machines

Slip ring assemblies are used in all applications which, due to their rotating movement, cannot be supplied with power or data via a fixed line.

Our systems enjoy an excellent reputation worldwide, and have for decades represented reliability and quality. We are highly specialised in building and manufacturing slip rings and data transmission systems – as specific solutions for our customers’ applications.

The usage areas range from construction vehicles, production machines and crane systems, to machine-tool building and environmental technology, such as wind power plants and purification plans, to robotics, planetariums and radar technology. We also equip explosion-proof systems with integrated media conduits, e.g. for oil production vessels.
Our systems are characterised by their compact structures, robust components and durability. The sliprings, contact units and power transfers for data/signal technology are individually manufactured and configured for each set of requirements.

We have a wide range of standardised series and highly developed technologies to create the technically and financially perfect solution for every customer. Also for complex requirements and extreme usage conditions.

Our slip ring system technology covers a wide range of applications. Based on this, the systems are built for the relevant purpose as per the customer’s individual requests, and adapted to the technical specifications and environment-based requirements.

By constantly improving standards and using innovative technology, we ensure that our solutions retain a high quality for the long-term. Improved technology means more profitability and functionality, e.g. through smaller structures, higher outputs or longer lifecycles.

### STANDARD TECHNOLOGIES

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<td>for conventional power- and data transmission</td>
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<td>PCB systems</td>
<td>for digital data/signals or power transfer</td>
</tr>
<tr>
<td>Cast sliprings</td>
<td>for applications with high rotational speeds and vibrations</td>
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<td>Multi-wire contact systems</td>
<td>with multi-layers for low noise signal transmissions</td>
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<td>STEMMANN-TECHNIK P10 system</td>
<td>the flat conductor bar for very large/concentric diameters</td>
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### SPECIAL SOLUTION TECHNOLOGY

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<td>Carbon/Carbon</td>
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<tr>
<td>High-current</td>
<td>systems for maximum output in the smallest spaces</td>
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The STEMMANN-TECHNIK Roof-Mounted Pantographs

Roof-mounted pantographs supply trains and other railway vehicles with power from conductive overhead wires, so passengers and goods can reliably reach their destinations.

STEMMANN-TECHNIK has been involved with developing and manufacturing roof-mounted pantographs for over 60 years. Our products are used for high-speed services, regional and local transport, trams and metropolitan railways, metros, locomotives, railway traction vehicles (EMUs), in industry and in mining on mine locomotives and trucks.

They enjoy an excellent reputation among manufacturers and railway operators alike.

Each of our roof-mounted pantographs is specially developed and produced according to customer requirements and the line network specifications, based on a wide range of well engineered series and model types. This creates individual, optimal solutions at minimum cost and in the shortest possible time.
Roof-Mounted Pantographs for Long-Distance and Local Transport

Our factory in Schüttorf covers the entire production range when it comes to roof-mounted pantographs. From researching and developing innovative details to manufacturing all components and assembling them to form an end product.

We have a very high level of vertical integration and excellent manufacturing skills which have been developed over the years.

**Long-distance transport**

Our roof-mounted pantographs of the "Panto®" and "DSA" series are developed for maximum performance in long-distance transport (Heavy Rail Vehicles). Their design, featuring high-strength light-weight materials and innovative system technology, has proven its worth in many countries around the world – under the harshest conditions.

The roof-mounted pantographs of our "Panto®" and "DSA" series can be designed for AC and DC overhead wire networks, reaching operating speeds of up to 380 km/h.

**Local transport**

Tailored to the customer's specifications and requirements, we produce high-performance roof-mounted pantographs for local transport (Light Rail Vehicles) based on a new, efficiency-oriented design – quickly, reasonably priced and with low maintenance. This is also why the Fb-product range is today one of the most popular pantographs used in local transport.
Local trains, metros and trams operate on electricity from so-called “third rails”, which run parallel to the tracks.

STEMMANN-TECHNIK specialises in individual, innovative solutions in the field of third rail shoegears. Always planned, built and manufactured in co-operation with our customers, based on their specifications.

Our third rail systems achieve high running efficiency, thanks to a high degree of vertical integration and intensive quality checks at our production plant in Germany, as well as constant performance tests.

The pantographs are fitted and removed manually or via remote control, i.e. through mechanical or pneumatic systems. These two standard systems serve as our construction basis. Individual adjustments for each separate case can thus be made quickly and cost-efficiently.

**THIRD-RAIL-SHOEGEAR SYSTEMS**

- **Top Running System**
- **Bottom Running System**
- **Side Running System**

We develop the perfect system for every vehicle type, vehicle model and rail network.
frost® Ground Contacts

Ground contacts are current bridges on the rotating axes of electric railway vehicles. They steer the circuit around critical wheel bearing areas in a controlled manner so as to prevent damage.

frost® ground contacts have a robust structure and comprise brush holders with graphite brushes, a rotating contact disc or a slip ring made from special metal alloys. The size and dimensions are based on the wheelset bearing location, and are adjusted to the customer’s specifications/constructions.

STEMMANN-TECHNIK has successfully designed, built and manufactured high-quality ground contacts since the 1930s. Our systems are used all over the world.

frost® ground contacts are also used as lightning protection components for wind power plants. We provide the relevant lighting protection systems, formulate technical installation proposals, offer advice on the choice of materials, and conduct trials and tests based on customers’ specifications.

**AREAS OF APPLICATION**

| Long-distance transport | ICE traction units, railway carriages, trailers etc. |
| Local transport | Regional trains, metros, municipal railways etc. |
| Special solutions | Low-floor vehicles, high-speed trains and special vehicles |
| Wind power plants | Lightning protection systems |
Service in All Areas

Customer satisfaction is our top priority; it is the key component to joint, long-term success.

**Extensive range of services**

We offer extensive services tailored to customer requirements, incorporating 100 years' experience and our technical skills in design, development, production and practical application. We attend to the needs of our customers and clients, think in a holistic, solution-oriented manner, act flexibly and offer rapid assistance within Germany and abroad.

As a manufacturer, we will provide you with original spare parts “Made in Germany” throughout our products’ entire service life.

**International network for local services**

International connections to our sales- and service partners worldwide enable us to cater to individual customer requests in accordance with the highest requirements. Anywhere in the world and unquestionably with the same quality as that achieved in Germany. On-site start-up by our own engineers is just one of the many examples of these.

Whether it is in Europe or elsewhere in the world: You can always rely on us.