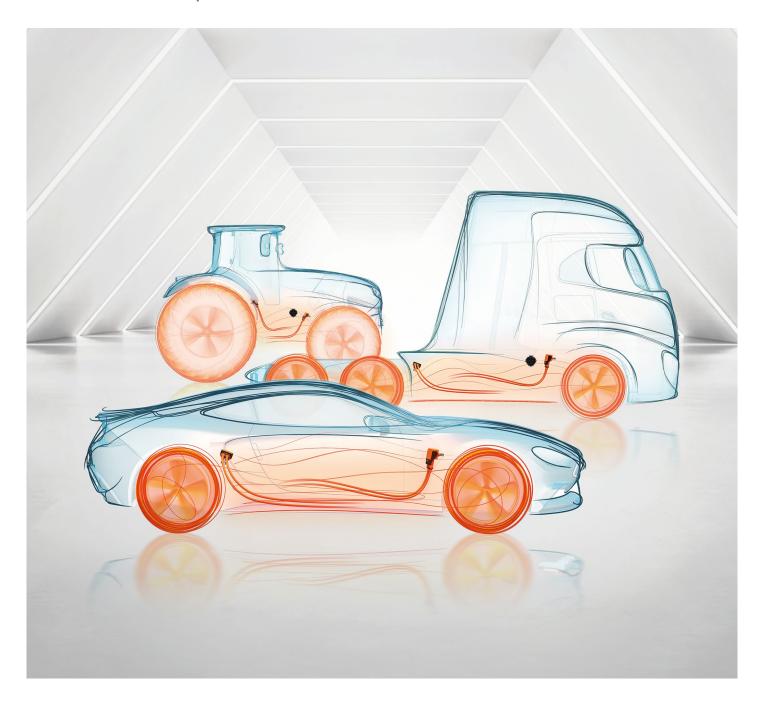


## Powerful and future-proof. Our pioneering on-board solutions.

**Electrical Connectors | Connections for Life** 

ΕN





### **MOBILITY**

## We enable strong connections in e-mobility



With Stäubli, you can rely on a competent partner whose know-how will always help you find an optimal solution, even for the most demanding applications. As long-standing collaborative partners in the automotive industry, we are always thinking

a few steps ahead when developing reliable connectors for future-proof mobility. We strive to outperform even the most ambitious targets with tailored solutions to suit your specific requirements.



Stäubli Group Swiss origins with over 130 years' experience



**Global Expertise** 6000 employees in 28 countries



**MULTILAM** Extremely durable and reliable electrical contact

### On-board solutions

Electric and hybrid vehicles are key to the energy transition: By reducing the carbon footprint of every journey, they help achieve climate targets and improve the quality of life of every individual. With our comprehensive expertise and a portfolio specifically for the e-mobility sector, our components meet the most demanding requirements and deliver high performance under extreme conOn-board applications require that every component provides outstanding quality, reliability and performance. Stäubli electrical connectors deliver efficiency, safety and durability - even in the harshest environments. Distinguished by their compact design and guaranteed vibration and shock resistance, they ensure permanent electrical contact thanks to our patented MULTILAM contact technology. External certifications and extensive quality testing underscore our commitment to providing the ideal connector solutions.

Moreover, our components enable more streamlined manufacturing processes and easier maintenance. The compact and clever designs eliminate the need for fasteners and special tooling, cutting down on assembly time.







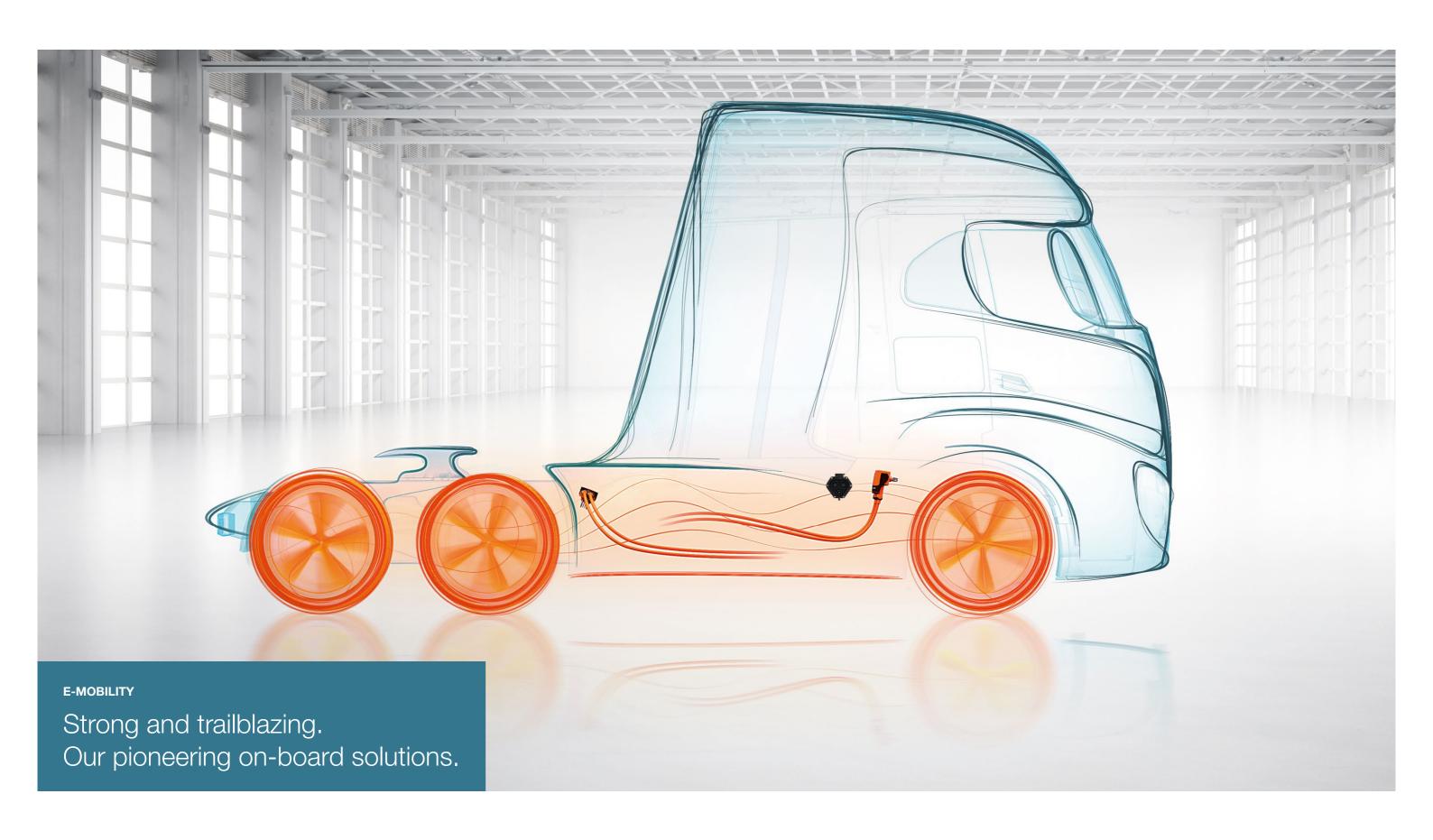
ZeroBolt busbar connections



PerforMore



Modular connector CombiTac





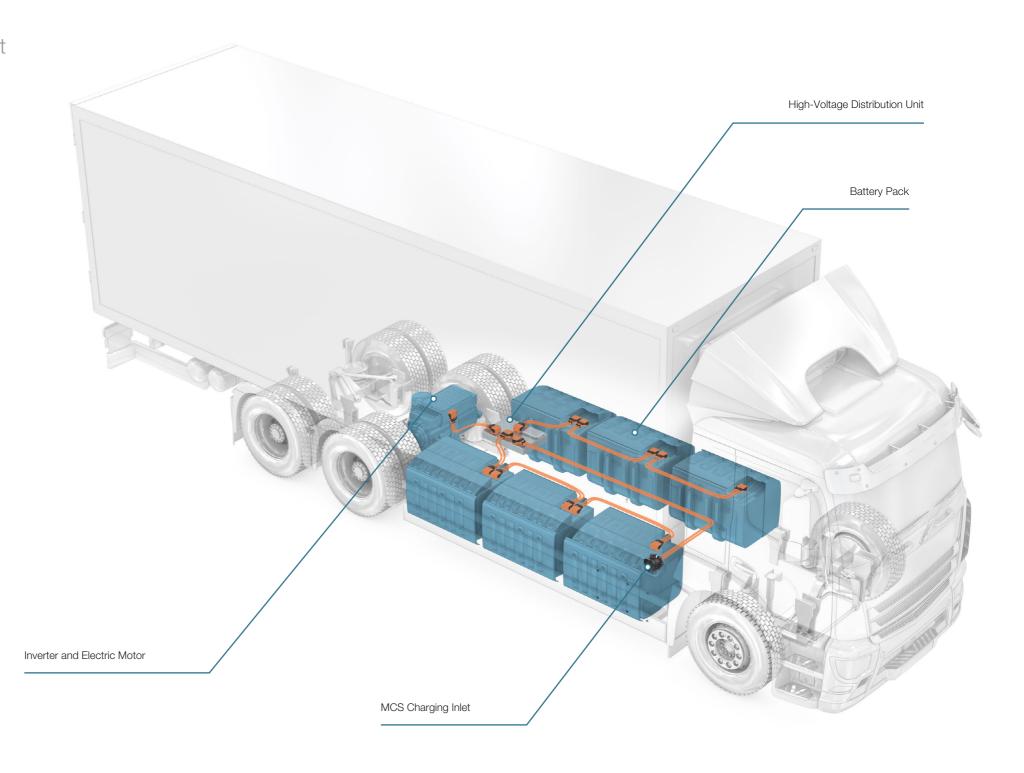
#### **E-MOBILITY COMMERCIAL VEHICLES**

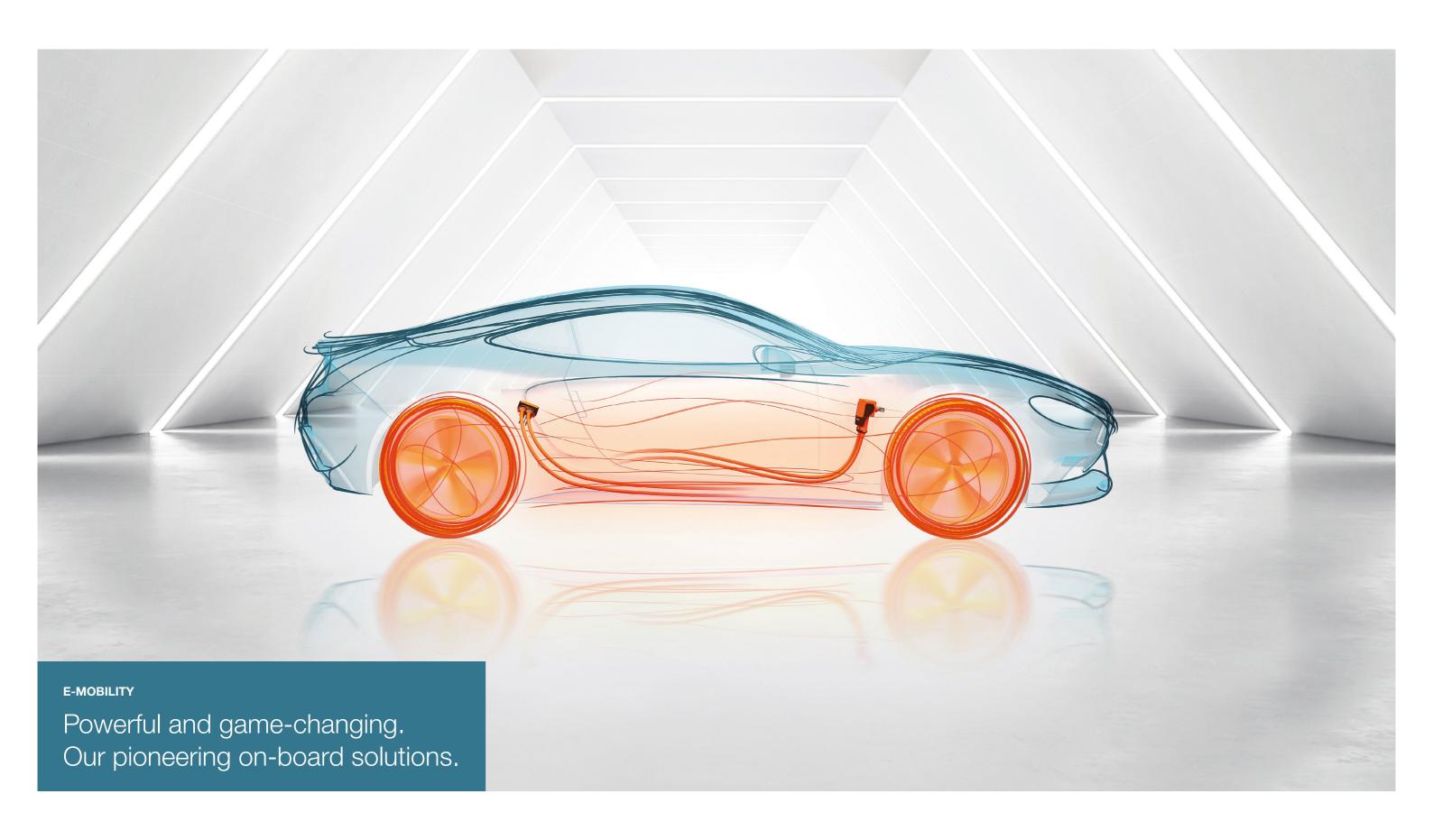
## Connections that work. Reliability you can count on.

Transporting people, goods or materials from point A to point B every day? Along these routes, your electric vehicles constantly face new challenges. We help keep you on the go.

Establishing a reliable connection between high-voltage batteries, inverters and other HV devices is crucial for vehicles. Only seamless interaction along the electric powertrain enables performance that combines high efficiency, durability and suitability for everyday use.

Featuring our innovative MULTILAM contact technology, PerforMore is ideal for vehicles with busy schedules. High current carrying capacity, low contact resistance, vibration resistance and a compact design are just a few benefits our connection solutions provide. As a long-standing partner in the transportation industry, we can support you with our expertise: from consulting to customized solutions and our collaborative approach.







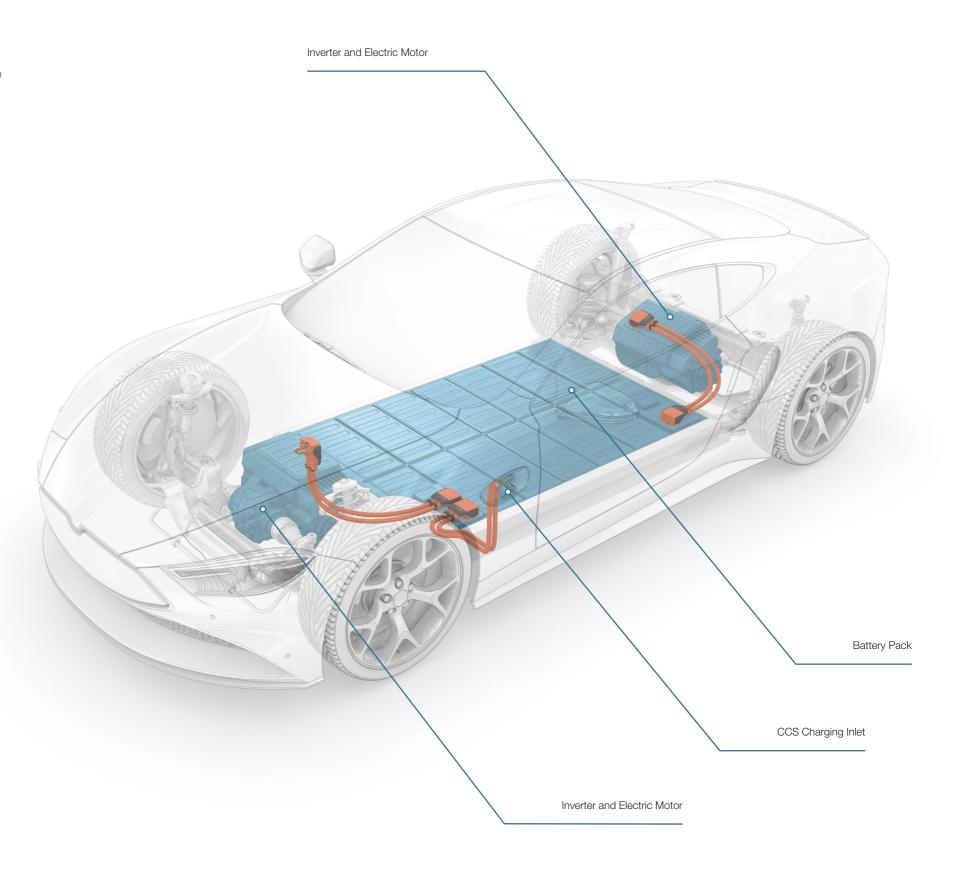
#### **E-MOBILITY HIGH-PERFORMANCE VEHICLES**

## Move in the fast lane. We ensure stable power.

Achieving the goals of our e-mobility customers is the driving force behind our innovations. It's an endless quest for improving your performance and economic goals.

With expertise in high voltage systems and as long-standing partners in the automotive industry, we are always thinking a few steps ahead when developing electrical connectors. We strive to outperform even the most ambitious targets with tailored solutions to suit your specific requirements and our innovative MULTILAM contact technology.

When it comes to on-board solutions for high-performance electric vehicles, we know what counts: very high current carrying capacity with compact dimensions, maximum reliability and durability under extreme conditions, high temperature and vibration resistance, and a high-quality EMC shielding effect. After all, the pinnacle of performance is maximum performance.







#### **E-MOBILITY MOBILE MACHINERY**

MCS Charging Inlet

New working standards. Reliable power transmission. High-Voltage Distribution Unit Battery Pack Energy transition, new technological possibilities and economic efficiency: The long list of sustainable reasons why it's time to update your business and mobile machines. Inverter and Electric Motor Be it forestry, agricultural or construction At Stäubli, we listen and understand your remachinery, special-purpose vehicles or conveyor technology: your mobile machinery needs to function safely, durably and without interruption. To achieve this, all components installed in electric and hybrid machinery must meet the highest quality, reliability and performance requirements.

quirements. With our many years of expertise and extensive e-mobility portfolio, we help you find the ideal solution. Our electrical connectors are renowned for their compact design, high operating temperatures, vibration and shock resistance, as well as guaranteed continuous electrical contact, thanks to our innovative MULTILAM technology.

Moreover, the components must be com-

pact to enable on-board applications as



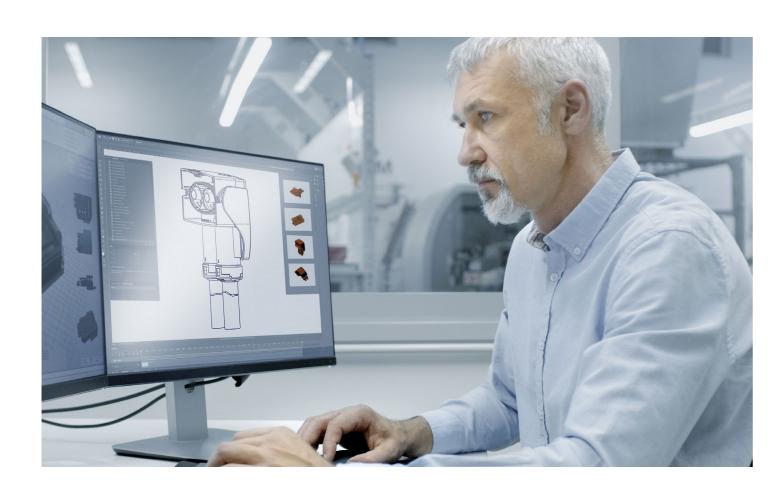
#### **ENGINEER TO ORDER**

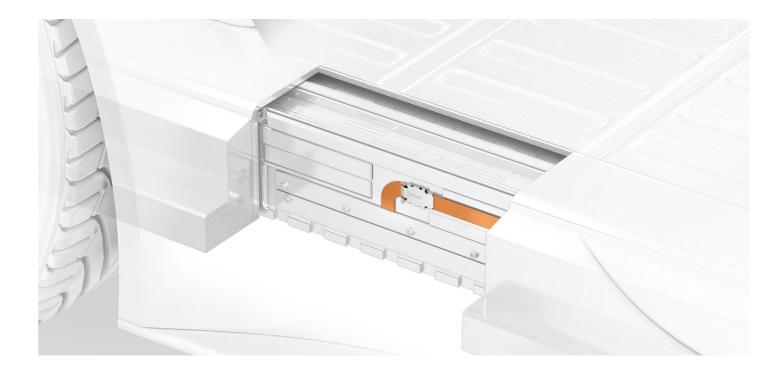
## Electrical connectors for custom specifications

Our greatest strength is that we listen and understand your e-mobility needs. Together, we develop solutions tailored to your exact requirements – even if it requires working on-site. With our expertise in pioneering contact technology, an extensive portfolio of industry-specific products, and partner-ship-based collaboration, we help you overcome any engineering challenge.

Whether you require a solution for a limited-edition series, standard production model or even millions of components to suit your design specifications, we are up to the challenge. Our MULTILAM contact technology enables static and dynamic solutions

that can be mated once or up to a million times. Offering an extensive range of diameter sizes, contact materials, contact surfaces, insulation mate-rials and termination types, we work directly with your engineers to create bespoke solutions.





### Crafted for excellence

Our proven MULTILAM contact technology also offers excellent performance and reliability in flat and fork-plug connectors. Thanks to a robust design, excellent material properties and specially formed contact elements, they provide high current carrying capacity and minimal contact resistance. Designs can also be modified to support the required current capacity, external shape or connection types upon request. In addition to a premium selection of high-quality base

materials, coating options and MULTILAM connector types, we also go the extra mile with labelling and tailored assembly. For complex applications, we work with you on-site to develop and test prototypes. And only once the field test phase is successfully completed to your satisfaction, we begin to roll out series production.

Every sector in e-mobility has its own unique challenges. Together with you, we develop perfectly suited solutions. Our designers and engineers enjoy developing custom connections for fluid, data, high current capacity and high frequency signals that thrive in demanding applications or harsh environments.

### Stäubli

#### **E-MOBILITY ZEROBOLT**

## Achieve more with less -ZeroBolt blind mating connections.

Our pluggable ZeroBolt busbar connections are the ideal solution for the most demanding blind-mating applications in wet- and dry environments and are suitable for a broad power range.

Busbars set the benchmark for connecting key internal components within high-voltage powertrain assemblies, inclusive of inverters and motors. Stäubli's ZeroBolt busbar connections benefit from our extensive experience in electrical contact technologies and are designed to address the issues typically associated with traditional bolted connections. They incorporate Stäubli's unique MULTILAM technology, enabling high current carrying capacity while also compensating for thermal expansion and vibration resistance. The flexibility of ZeroBolt's pluggable design streamlines manufacturing, and significantly reduces costs and risks when compared to traditional bolted con-





fasteners required



thanks to more optimized process



High current carrying capacity



Space saving



**Proven MULTILAM** contact technology

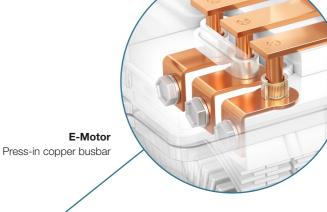
#### **Various busbar connections**

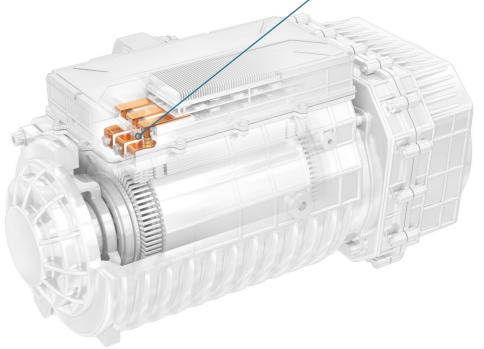














### **MEGAWATT CHARGING SYSTEM (MCS)**

## Welcome to the megawatt club!

As more EVs hit the road in long-distance and heavy-duty applications, charging these larger capacity batteries within a reasonable time has been a significant challenge. The Megawatt Charging System (MCS) standard is set to drastically shorten charging cycles by delivering up to 4.5 MW of charging power to trucks and other heavy-duty vehicles.

The Stäubli Megawatt Charging System (MCS) is designed around the CharlN task force specifications and with a special emphasis on robustness and easy handling. It allows for quick and user-friendly charging, enabling drivers to charge their electric heavy-duty vehicles manually without the need for supporting machines or robots. With larger conductor cross-sections for the cable assembly according to existing

standards, the MCS system also enables faster charging times and increased customer flexibility. This makes it an essential component in the push towards sustainable transportation.

Capable of delivering up to 4.5 MW of charging power, with a rated current of up to 3000 A, the Stäubli MCS system significantly improves the output of existing combined

charging systems. This high charging power enables a significant reduction in charging time, resulting in longer operating times for heavy-duty vehicles. The special robustness of the Stäubli MCS further underlines this quality and prevents downtimes.



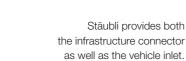
Based on CharlN Task Force

Customizable inlet

Proven MULTILAM contact technology

Power up to 4.5 MW















#### **E-MOBILITY PERFORMORE**

## PerforMore: Connectors for electric powertrain systems.

Our compact two-pole connector is the ideal solution for high-power charging (HPC) systems, high-voltage batteries, inverters and high-voltage distribution units (HVDU).

PerforMore meets the stringent requirements for safety, reliability and performance in electric vehicles based on LV-215 standards. The electrical connector also features a compact design and user-friendly operation with its two-stage unlocking system.

Dependent on the ambient temperature, PerforMore can transmit continuous currents of up to 600 A with minimal power loss. The Ø 10 mm contact system features our proven MULTILAM technology which is ideally suited to the demanding requirements of the electric driveline – ensuring vibration resistance and high operating temperatures, among other things.







High current carrying capacity with compact dimensions



st, safe reliable



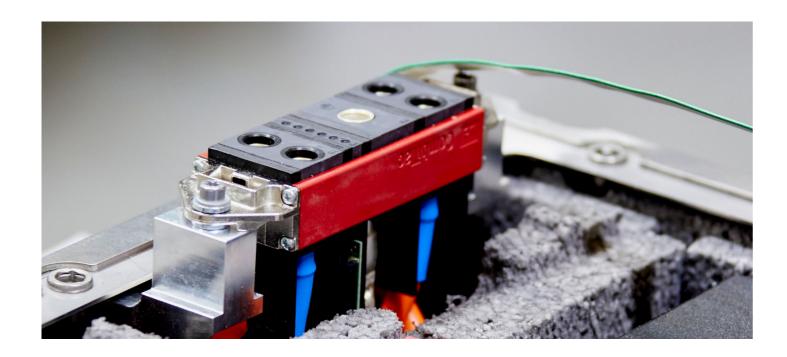
High-quality EMC shielding



HVIL with two-stage unlocking system







#### E-MOBILITY COMPLEMENTARY SOLUTIONS

## CombiTac: The ultimate modularity

Combining quality, modularity and field-proven designs, CombiTac delivers cost-efficient and durable connections to meet the most demanding requirements. Equipped with our innovative MULTILAM technology, the configurable and expandable CombiTac connectors enable you to plug into a world of possibilities.

Ideal for a variety of applications, including

e-mobility manufacturing and testing, modular CombiTac connectors also offer customization if you need it. The space-saving modular connector system can be easily configured online to meet your exact specifications. CombiTac guarantees high-quality connectors with a long lifetime under the most demanding mechanical and environmental conditions.





## EvoTrak lite: High durability metallic connectors

Originally developed for railway applications, EvoTrak lite is a leading modular connector system used across numerous industries that require reliable power transmissions for medium power applications. Thanks to its robust and versatile connection design, the series offers unparallel contact reliability and is configured to match your needs.



## Automated charging solutions

Increasingly higher currents and faster charging possibilities. Ensuring the highest possible reliability and uninterrupted operation. The demands for electric mobile machinery in the mining, port logistics and agriculture sectors, as well as commercial

trucks and buses, are growing rapidly. With the QCC rapid charging system, Stäubli offers a flexible, safe and future-proof solution that delivers scalable power in the harshest environments.





### **SERVICES AND SUPPORT**

# Being there for you. It's our business philosophy.

Customer proximity is the foundation of our business since the very beginning. We apply this approach to everything we do – from customer collaboration to technical support and individual training. If you're looking for a dependable partner with reliable connections, we have what you need.





Stäubli Group is an international company with Swiss roots and over 130 years of experience. We offer our customers worldwide solutions in the Electrical Connectors, Fluid Connectors, Robotics and Textile divisions. Our global workforce is committed to increase our customer's sustainably and productivity across many industrial sectors.



Stäubli UnitsRepresentatives/Agents

## Global presence of the Stäubli Group

www.staubli.com

