

E-mobility

Connectors | Advanced connection solutions

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FAR-SIGHTED PARTNER

An international group serving all industrial sectors



Stäubli, a market leading company, continually pushes for innovation, addressing current and future needs for advanced connection solutions.

Developing and delivering high-performance solutions tailored to specific business requirements, as well as understanding and anticipating the trends shaping each branch of industry, is the strategy pursued by Stäubli, as global leader in advanced connection solutions for all applications: fluid, gas and electrical. Fluid mono-connections, electrical connectors, multi-connection systems for all energy sources, tool changers for robots or Quick Mould Change solutions...

each Stäubli assembly is engineered and built from parts of consistently matched quality and design. Our solutions improve the reliability, efficiency, performance and usability of equipment, thereby raising the productivity bar and guaranteeing operator safety.

Expert in e-mobility solutions

In view of the gradual depletion of fossil fuels and against the background of growing environmental awareness, mobility is being reinvented, becoming more innovative, efficient and sustainable. Key to the energy transition process, e-mobility seeks to reduce the carbon footprint of each journey and help improve everyone's quality of life.

As a long-standing partner of the automotive and transport industry, we fully understand our customer's problems and expectations: service continuity, optimisation and cost efficiency of journeys, respect for the environment, etc. We provide an optimal and adapted response, whether for urban buses, autonomous shuttles, port and airport vehicles, automated guided vehicles (AGV), private vehicles, company vehicle fleets, ships, and many more.





OUR E-MOBILITY EXPERTISE

Multidisciplinary expertise for all types of advanced connection solutions



Thanks to its know-how in mechanical, fluid and electrical fields, the Stäubli Group is your go-to partner satisfying all your needs for end-to-end fluid, gas and electrical connection solutions, with high and world-renowned levels of expertise, quality and performance in all industrial sectors.

A major role and commitment starting from the analysis of your needs

Fluid and electrical connections are key to both mobility systems and safety, meaning that they should be factored into your project during the front-end engineering stage. Our experts deliver personalised advice and the best solutions tailored to your specifications early on in the project lifecycle.

Keeping up with market trends, our group operates on an international scale and can take account of your local requirements and your need for coordination, individual support and an available, fast-acting service close to your production and operations sites.



All types of vehicle



50 operators



200 manufacturing partners



OUR E-MOBILITY EXPERTISE



Resources and teams to reflect your needs

To meet your requirements and specifications (reliability, total safety during filling, easy-to-use, tightness, temperature control, resistance to temperature variations and vibration, guarantee of a permanent electrical contact, robustness and long service life of your equipments, as well as reduced and easy maintenance, etc.), our dedicated teams (market specialists, R&D, applications, testing, methods, quality and supply chains) can draw on their expertise, providing support and creating value on an international level at every stage of your project.

We offer appropriate and competitive solutions, as well as coordination and planning, analysis and validation of specifications, pre-studies, prototyping, qualifica-

tion testing, specific testing, serial testing, quality control, commissioning, use, maintenance, continuous improvement and redesign to cost.

Improving the maintenance of modern means of transport

E-mobility is known for providing numerous benefits in terms of performance and environmental protection. Service availability expectations are high with no tolerance for disruptions, meaning that quick and preventive replacements are needed for specific types of equipment and infrastructure. In addition, mechanical and electrical parts need to offer a more space-saving and lightweight design to meet new comfort requirements without any trade-off in performance.

To address this challenge, we design reliable, lightweight and compact quick-release couplings that are very easy to use, even in cramped conditions, thereby minimizing your vehicle downtime and equipment maintenance processes.



OUR APPLICATIONS

Connections: a key link in e-mobility

Battery pack

- Quick-release couplings for battery cooling
- Electrical connectors for the connection and maintenance of battery packs



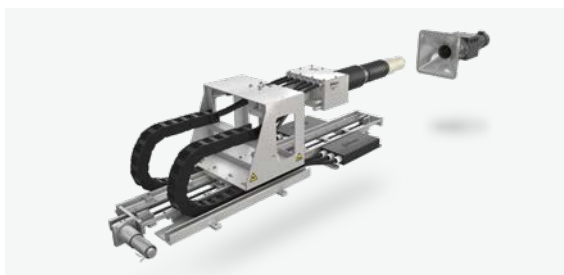
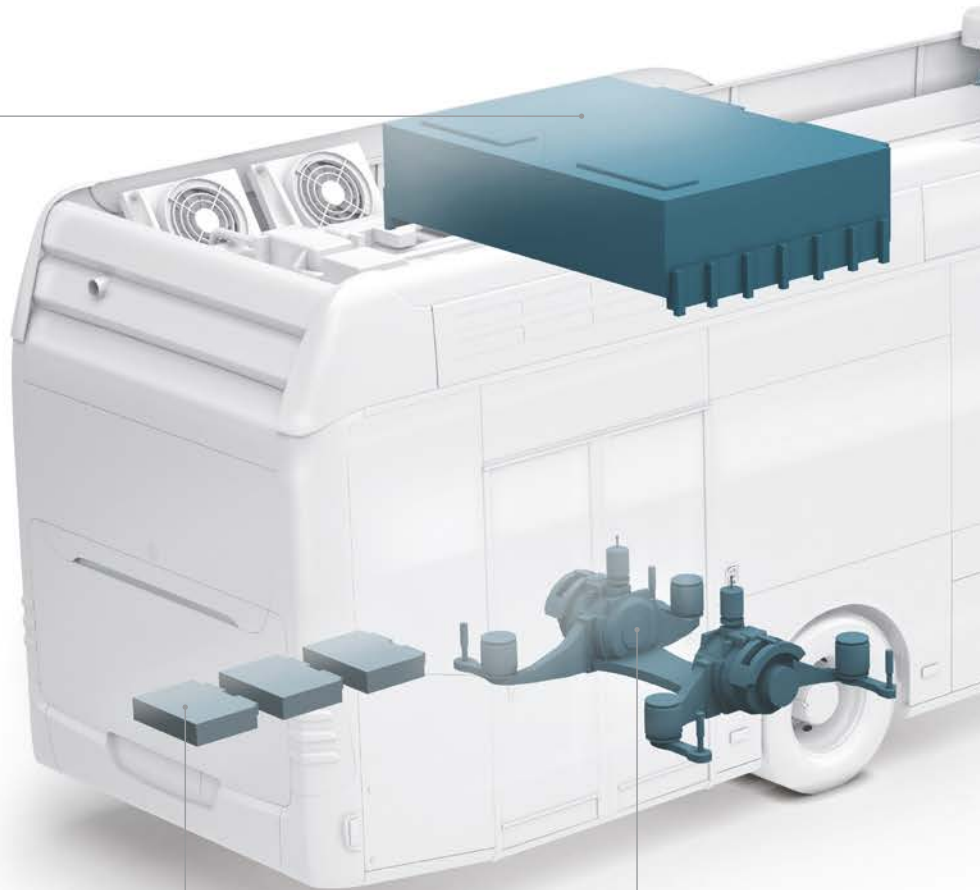
Power converters

- Quick-release mono- or multi-couplings for cooling on-board electronic circuitry
 - Power electrical connectors for converter inputs/outputs



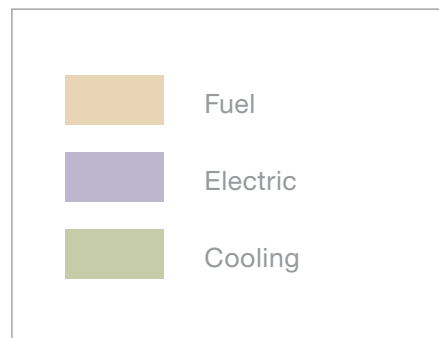
Electric motor

- Quick-release couplings for engine cooling systems
- Electrical connectors for power transfer



Charger / fuel cell
(depending on configuration)

- Quick-release couplings for component cooling
- Electrical connections for components
- Manual or automatic quick-release couplings for low-pressure gas circuits (line between hydrogen store and fuel cell)



Energy supply

- Rackable multi-connection system for slow charging and fast battery swapping
- Automatic conductive system for ultra-fast charging during a journey (opportunity charging)
- Manual connection for fast charging when the vehicle is in service
- Hydrogen filling and break-away protection system for electric vehicles with a fuel cell



Other applications

Fluid and electrical connections for laboratory and production testing

- Multi-connection system for electric motor and battery test benches







OUR TECHNICAL STRENGTHS

Unique expertise and an end-to-end range for the e-mobility market

The advantages of our solutions

Energy-supply connections (recharging and refuelling at filling stations), inter-module connections, cooling of on-board electronic circuitry, multiple connections for test benches and laboratory testing to name just a few of the fluid and electrical applications that demand a high level of reliability.

High-quality connections:

- Optimum flow, no risk of connection errors and sealing guaranteed for all on-board technology throughout the vehicle's lifecycle thanks to flat-face anti-pollution solutions.
- MULTILAM contact band technology guarantees permanent contact between surfaces and, consequently, low-current and constant contact resistance.

Safe and easy to use:

- Compact connectors for a space-saving design, automatic coupling and easy handling.
- Light and ergonomic nozzles, which ensure filling operations are carried out safely.

Robust connections:

- Robust locking.
- Longer service life, corrosion resistance.

Fast maintenance:

- Shorter assembly times for the manufacturer and easier complete system maintenance for the end-user.

Endless possibilities:

- Modular technology supporting a wide and varied array of connection solutions geared towards each specification.

Reliability and safety in the most extreme conditions:

- Whether electrical (up to several kA), thermal (up to 360°C) or mechanical (up to one million mating cycles), resistance to temperature variations, vibration and impact.



● Staubli Units ○ Representatives/Agents

Global presence of the Staubli Group

www.staubli.com