

FAST MOVING TECHNOLOGY

STÄUBLI

Railway

Connectors | Advanced connection solutions





INNOVATIVE 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 connections, multi-connection systems for all

energy sources, tool changers for robots or Quick Mold 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 railway solutions

Urban and intercity rail transport, whether for passengers or freight, underlies the environmental and demographic challenges facing today's world.

Users are constantly on the lookout for

services offering superior comfort, safety and speed, while operators continue to raise their demands for performance, productivity and reliability.

As an industry partner and key supplier in the international railway sector for more than 30 years, we have a clear insight into your challenges and expectations, such as service continuity, extreme weather conditions and mechanical stresses. We provide an effective response with optimized solutions, whether for high-speed, main-line, suburban or regional trains, or tramways and underground railways.



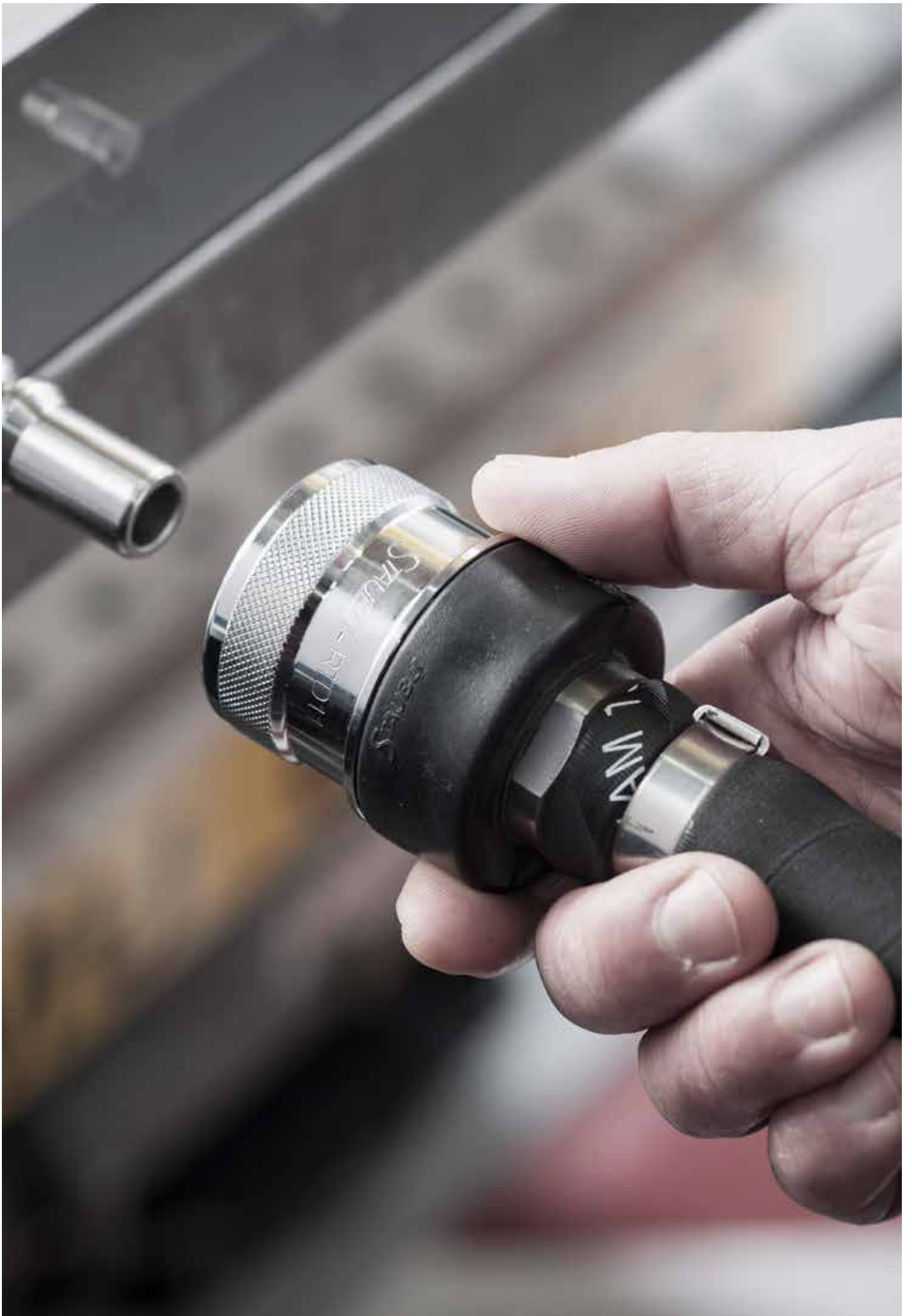
50
countries



5,000
employees worldwide



12
production sites



OUR RAILWAY 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 for 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 personalized 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.



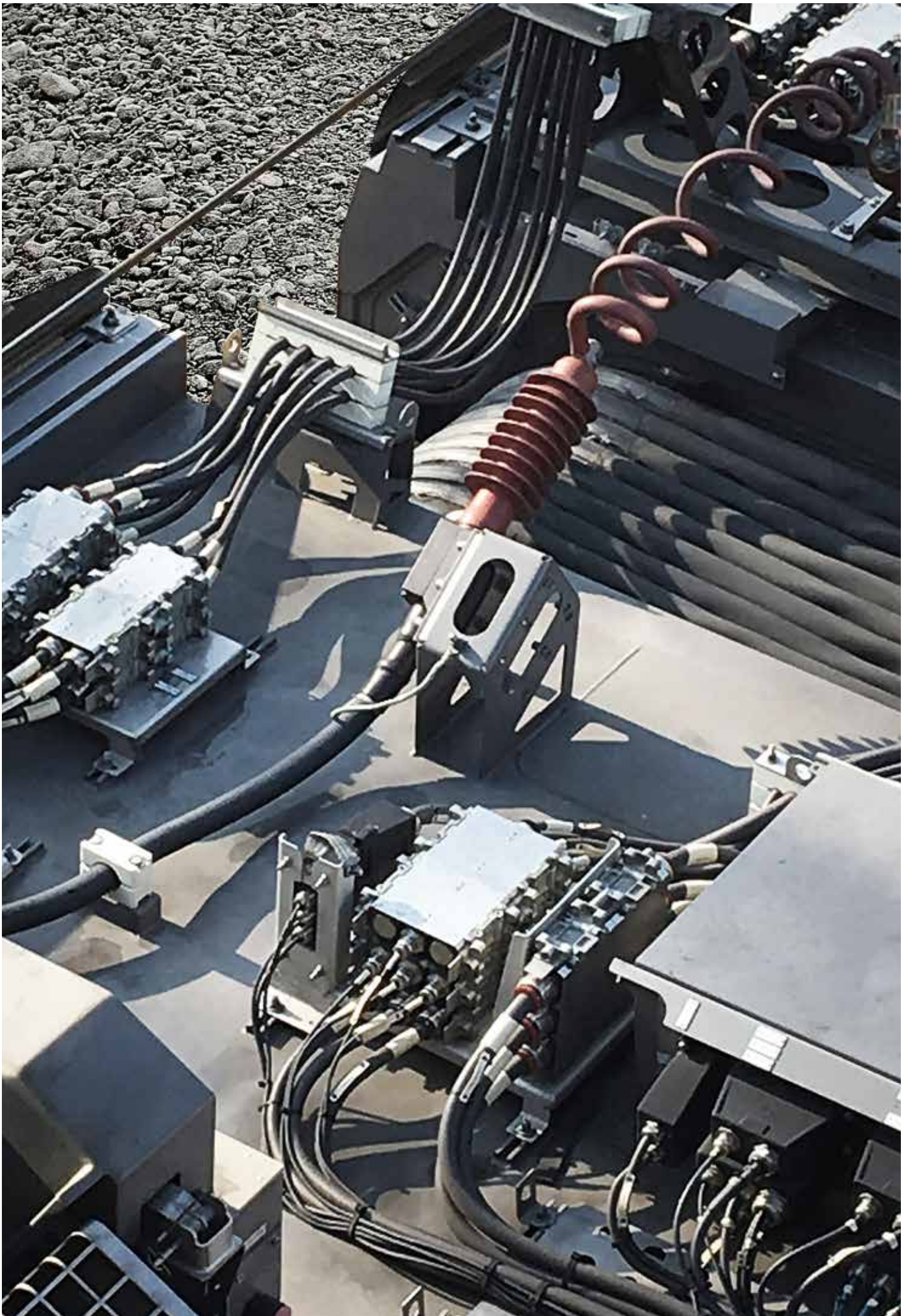
All types of trains



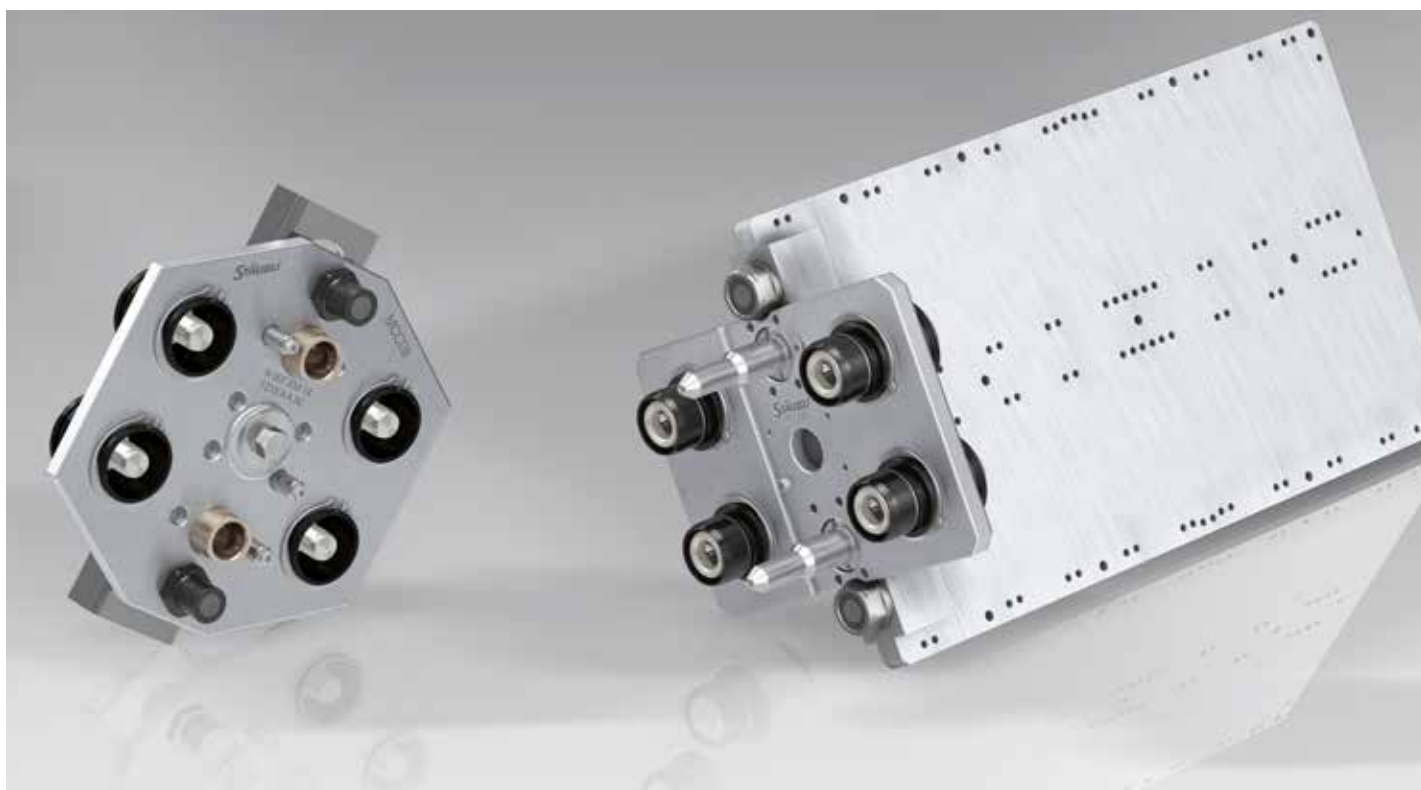
200 operators



50 manufacturing partners



OUR RAILWAY EXPERTISE



Resources and teams to reflect your needs

To meet your requirements and specifications (sealing, flow rates and pressure drops, electrical conductivity for high-power systems and signals, interface and space limitations, mechanical and thermal stresses, installation, use, maintenance, safety, reliability, operating costs, 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, qualification testing, specific testing, serial testing, quality control, commissioning, use, maintenance, continuous improvement and redesign to cost.

Improve and secure railway maintenance

Railway vehicles are constantly subject to various types of stress. Service availability expectations are high with no tolerance for disruptions, meaning that quick and preventive replacements are needed for specific types of equipment. 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 confined conditions, thereby minimizing your vehicle downtime and equipment maintenance processes.



OUR APPLICATIONS

Connections: a key link in the railway transport chain

Inter-body connections

- Pneumatic quick-release couplings for air lines
- System of modular electrical connectors for power transfer



Pantograph systems

- Pneumatic quick-release couplings



Rheostats

- Modular power electrical connectors for inputs/outputs



Control systems

- Modular system for the electrical connection of control or communication systems



Draining, filling, fluid level checks

- Hydraulic quick-release couplings for tanks, sumps, gearboxes and motor axles



Braking and suspension

- Pneumatic quick-release couplings for pressure readings and leveling tests



Car / bogie / engine or carrier connections

- Pneumatic connections for flanged-lubricating devices, braking circuits, etc.
 - Hydraulic quick-release couplings for brake calipers, accumulators and hydraulic pressure units
- System of modular electrical connectors for power transfer
- Multi-connection systems for quick bogie connections



Grounding solutions

- Electric hinges between boxes / cabinets and doors
- Grounding block with distribution



Other applications

- Quick-release couplings for automated door systems, drinking water circuits, air conditioning, sirens, etc.
- Quick-release couplings for fuel circuits

Custom solutions for infrastructure applications:





- Tunnels
- Substations
- Battery chargers
- Engine power supply in case of maintenance

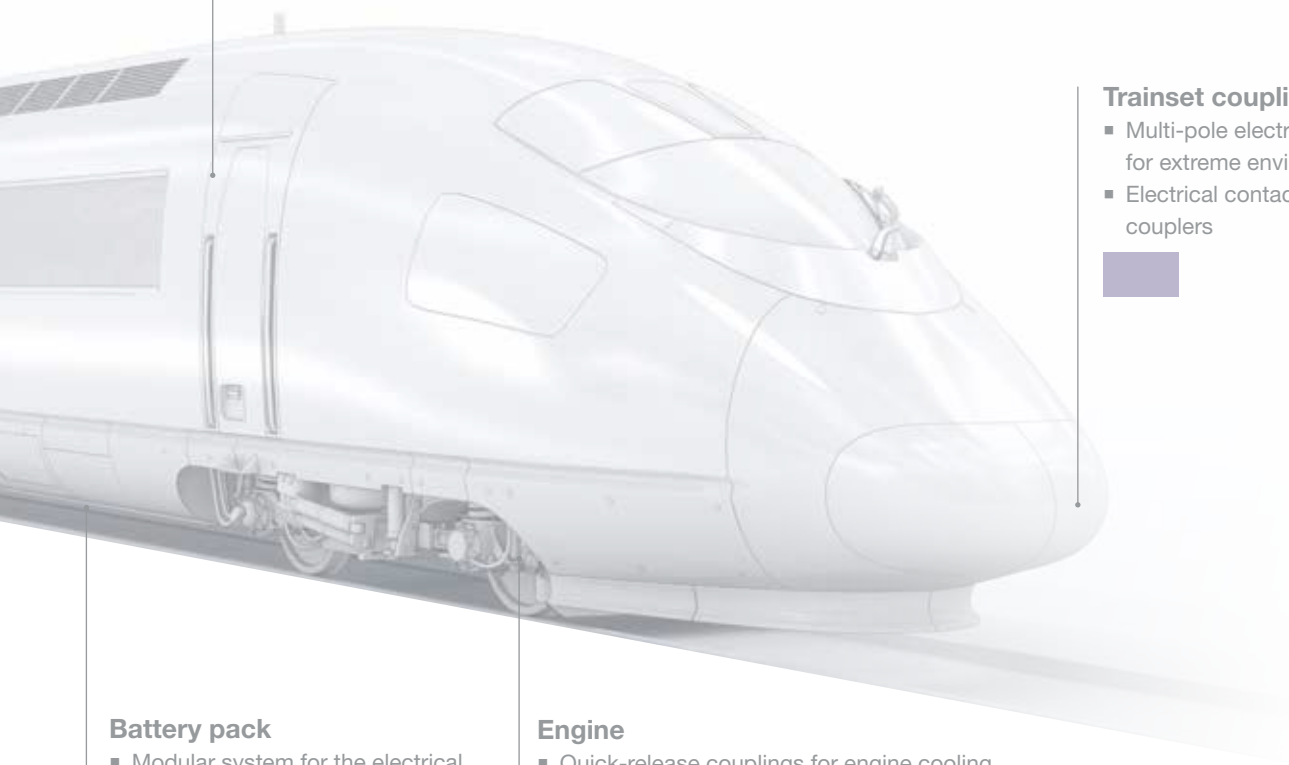


Power converter / auxiliary converters / transformers

- Quick-release mono or multi-connections for cooling on-board electronic circuits
- Connection solutions for laminated insulated bipolar busbars
- Insulated and uninsulated fork connectors for quick connections to bays
- Pin / socket assemblies for the quick connection of power modules
- Modular power electrical connectors for converter inputs / outputs



	Hydraulic
	Electric
	Compressed Air
	Cooling



Trainset coupling systems

- Multi-pole electrical connectors for extreme environments
- Electrical contacts for automatic couplers



Battery pack

- Modular system for the electrical connection and inspection of battery packs
- Quick-release couplings for battery cooling



Engine

- Quick-release couplings for engine cooling systems
- Modular electrical connectors for power transfer
- Junction boxes for the quick connection of converter inputs / engine outputs







OUR TECHNICAL STRENGTHS

Unique expertise and an extensive range for the global railway market

The advantages of our solutions

Cooling of on-board electronic circuits, body-to-bogie and inter-body connections, hydraulic circuits, braking systems, battery pack connections and converters are just some of the fluid and electrical applications requiring supreme reliability.

High-quality connections:

- Optimum flow, no risk of connection errors and sealing guaranteed for all systems on the train.
- MULTILAM contact band technology guarantees permanent contact between surfaces and, consequently, low-current and constant contact resistance.

Usability:

- Compact connectors for a space-saving design, automatic coupling and easy handling.

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.

Countless possibilities:

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

Reliability and safety in the most extreme conditions:

- Whether electrical (up to several kA), thermal (up to 680 °F), mechanical (up to one million mating cycles), resistance to temperature variations, vibration and impact.



■ Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

www.staubli.com