

SUCCESS STORY

The Key to Welding Excellence and Consistent Quality

The automotive industry is one of the most important economic sectors in many industrialized nations. Production times and capacities play an enormous role, alongside vehicle safety.

To ensure this, products and tools for production with the highest quality, reliability, and energy efficiency are crucial. Robots are used for automation and assistance in production. These include welding robots and welding guns. One of the well-known manufacturers of these welding guns is NIMAK. Their products can be found at leading car manufacturers. To ensure that their welding guns and robots function smoothly, they rely on high-quality and reliable components.

Driven by innovation

Weld guns can be found in automotive body shop of car manufacturers worldwide. One of the market-leading manufacturers of

these weld guns is the German Company NIMAK. Their resistance welding guns are mainly used in the automotive industry. NIMAK produces welding guns, welding machines, bonding, and dosing systems through to transformers according to the customer's requirements. Their products meet the highest quality standards. Special emphasis is placed on the highest quality thus offering products that are reliable in the long term.

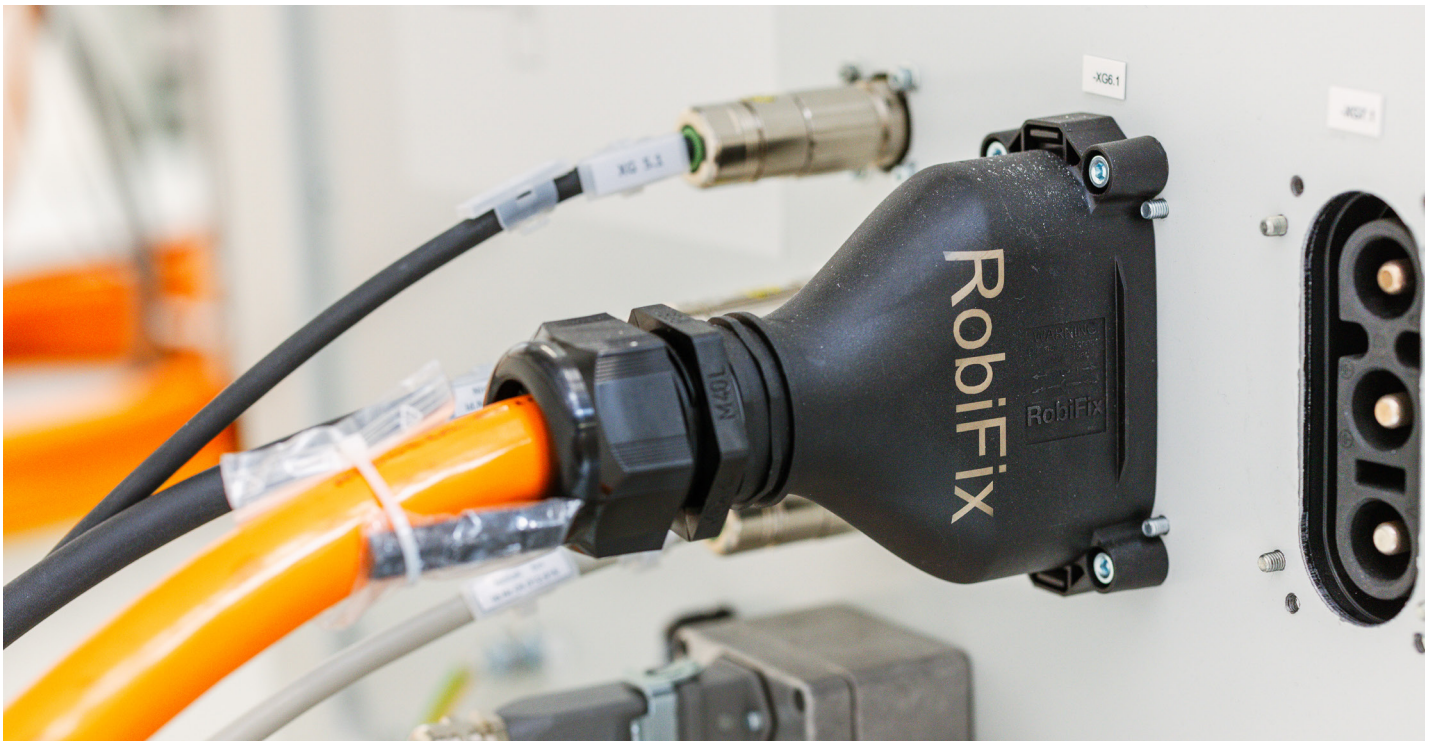
They are the only supplier for premium automotive manufacturers that are approved to meet customer-specific standards for welding guns.

Market: Flat primary circuit connectors: RobiFix

Application: connector for welding guns

- Fast integration and easy maintenance- Compact and space saving
- Extremely compact design with superior performance
- First mate/last break PE-contact for additional safety
- High current-carrying capacity, polarity protection

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The right connection makes the difference

In the automotive industry, a production downtime would mean an enormous loss of time and money. That's why every single component in the production process of a car must work smoothly and reliably. One of the most important components is the robotic welding gun, which plays a critical role in utilizing resistance welding to establish enduring connections between vehicle parts. As an average car is held together by more than 5000 spot welds, this makes it an essential part of the production process.

As NIMAK's robotic welding guns are used by many car manufacturers, they are particularly dependent on high-quality and reliable welding gun components. In order for the robotic welding guns to function properly, the energy must be transferred from the so-called welding timer to the primary side of the transformer of the welding gun. This is done through a dresspack. It must be able

to permanently withstand the high energy to be transferred and keep the connection low resistance so that it is not damaged. Continuous operation of the welding gun and its components can cause high wear on the dresspacks and their connections. NIMAK therefore requires a connection that can be changed quickly and easily. It must also be possible for non-technical personnel to make this change in order to be ready for use again quickly. Screw connections, on the other hand, must be replaced and fitted by specially trained technicians. This takes more time and results in longer downtimes.

Simple and easy replacement - RobiFix from Stäubli

With RobiFix, Stäubli offers exactly the right connection solution for this application on the NIMAK robotic welding guns. This plug connection is not only easy to mount and change, but it also saves time and is user-friendly. The interfaces of the connector are designed to prevent incorrect assem-

bly, making it suitable for both technical and non-technical individuals. One of the key features of RobiFix is its high level of user protection. It is protected against accidental contact, ensuring the safety of the user. Additionally, the first mate, last break PE contact provides an extra layer of safety. It only allows current to flow when it is fully closed and interrupts the current flow immediately when it is opened, thus ensuring a safe interruption of the protective conductor connection. The compact and powerful design of RobiFix allows for the power cables between the welding control unit and the welding gun to be divided into multiple sections. This simplifies handling and maintenance, making it more convenient for users. Furthermore, RobiFix features Stäubli's patented MULTILAM contact technology, which provides a reliable connection. MULTILAM louvers maintain a constant contact force, which allows them to maintain continuous contact with contact surfaces. This results in consistently low contact resistance and high

contact quality, which ensures long life and low total cost of ownership. This makes it ideal for transmitting very high current. It can be used for a thermal steady current up to 223 A with a 10% safety factor, depending on cross-section, cable type, and ambient temperature.

Customer Benefit

The use of Stäubli's RobiFix connectors instead of screw connections reduces the time required for connection and maintenance, resulting in less production downtime. In the automotive industry, every minute saved means another car can be produced. This makes NIMAK's welding guns with Stäubli's RobiFix a reliable tool for smooth production for its customers.

In addition, Stäubli's RobiFix connectors reduce assembly costs and sustainably lower the total cost of ownership compared to conventional solutions. While bolted connections can only be installed by highly qualified personnel, Stäubli's solutions are user-friendly and do not require extensive training.

NIMAK and Stäubli have been working together for over 20 years. As a result, our products have been specifically adapted to NIMAK's needs, and Stäubli's employees, thanks to their many years of experience, understand NIMAK's needs and can assist with their know-how. Further cooperation projects in the field of secondary circuit connection are already planned.

"Having a premium partner with whom we can talk on an equal level is essential for NIMAK as an innovation and quality leader in joining technology," emphasizes Kay Nagel, Member of the Management Board at NIMAK. "We have enjoyed such a partnership with Stäubli for more than two decades and we can always rely on the innovative strength and technology from Stäubli. The open and constructive communication makes Stäubli our first point of contact in our technology development and together we can put new ideas into practice and bring products to market".



Kay Nagel authorized signatory and member of the management board at NIMAK

Customer benefits

- Ideal in combination with single-core conductors
- Easy replacement of upper and lower arm dress package helps reduce downtime and minimize production loss.
- User-friendly installation

About Stäubli

Stäubli is a global mechatronics solution provider with three core activities: Connectors, Robotics and Textile. The international Group has a presence in 28 countries.

Stäubli Electrical Connectors is a specialist for advanced contact technology and technically mature solutions with a product portfolio ranging from miniature connectors up to high-power connectors for various industries.

www.staubli.com/electrical