

PRESS RELEASE

IAA TRANSPORTATION: Konzelmann and HYJOIN Present Innovative Direct Joining Process for KBerstring and Metal in Battery Systems

Konzelmann and HYJOIN combine application expertise and joining technology to directly bond thermoplastics to metal. The combination of Konzelmann's KBerstring and the hyJOIN bonding technology by HYJOIN opens up new possibilities for the safe, efficient and sustainable integration of components into battery systems. The joint is designed for dynamic applications with varying forces and can be disassembled, if necessary, without damaging the metal component. Konzelmann will provide insights into the technology from September 15 to 20, 2026, at the IAA TRANSPORTATION in Hanover (Germany), hall 19/20, booth D50.

Löchgau, Germany, August 12, 2026 – Integrating components into battery systems places high demands on durability, efficiency and safety. This is precisely where the joint solution from Konzelmann and HYJOIN comes into play: By combining Konzelmann's KBerstring with the hyJOIN bonding technology by HYJOIN, a new solution is created for the direct, high-strength bonding of plastic and metal without additional fasteners. In doing so, the companies are opening up new possibilities for safe, efficient, and sustainable battery systems.

Direct Joining of Plastic and Metal

Konzelmann's KBerstring is a key component for the safety of electric vehicles. The integrated diaphragm technology serves both to equalize pressure and to provide emergency venting for lithium-ion batteries, helping to prevent the battery from overheating. Until now, the KBerstring was attached to the battery's metal housing using additional elements such as screws, clips or adhesives. The new solution reduces the number of fasteners and process steps, enabling more resource-efficient production for the customer. While offering higher load-bearing capacity, the existing design is simplified and space is saved. In addition, the direct connection creates new possibilities for further applications in the production of

lithium-ion batteries. Furthermore, the process can potentially be used in all applications where plastic components need to be joined to metal with high resistance.

“Each individual process step takes only a few seconds,” explains Dr. André Konzelmann, Chief Executive Officer of Konzelmann GmbH. “This makes the process suitable not only for attaching the KBerstring to the metal casing of electric vehicle batteries, but also for automated assembly processes in industrial settings. An added bonus is that we also enable fluid-tight connections, opening the door to a wide range of applications.”

hyJOIN: Direct Thermal Joining in a Few Seconds

As a technology partner, HYJOIN provides the joining technology that allows thermoplastics to be adhered to metal without additional fasteners. First, the metal surface is prepared. The components are then positioned and joined using inductive heating. The plastic melts at the contact surface and bonds with the prepared metal surface. Once cooled, the joint is highly durable and can be immediately subjected to loads.

Rugged Connection Even for Demanding Applications

The process meets the requirements of customers in the electric mobility sector: Battery connectors are subjected to high dynamic loads during operation. A connector is not only subjected to the forces of the component itself; connected hoses and cables can also transmit motion and vibration. Thanks to the process's efficiency and high load-bearing capacity, this joining technology is significantly superior to conventional connection solutions. Another advantage is its reversibility: The KBerstring can be detached from the metal component through brief inductive heating and can then be replaced. The metal component remains intact during this process. When a new plastic component is used, a comparable initial strength is subsequently restored.

Visit Konzelmann at IAA TRANSPORTATION 2026

Learn more about the combination of the Konzelmann KBerstring and the hyJOIN bonding technology from September 15 to 20, 2026, at IAA TRANSPORTATION in Hanover (Germany) at the Konzelmann booth (hall 19/20, booth D50). A special highlight is the press conference “Konzelmann Inside” on Monday, September 14, from 2:00 p.m. to 2:20 p.m. at the Konzelmann booth (D50/hall 19/20). Dr. André Konzelmann will be available on site to discuss this topic. If you are interested in attending the press conference, please contact the press representative.

Trademark information: KBerstring is a registered trademark of Konzelmann GmbH. hyJOIN is a registered trademark of HYJOIN GmbH.

Press photo (preview)



Caption: The Konzelmann KBerstring is directly and securely attached to the metal casing of a lithium-ion battery using the new hyJOIN joining technology. Photo: Konzelmann GmbH.

You can find the downloadable image here: [LINK](#)

The image provided with this press release may only be used in connection with reporting on Konzelmann, citing "Photo: Konzelmann GmbH."

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About Konzelmann

For more than 60 years, Konzelmann GmbH has stood for innovations made of plastics. The family-run company is headquartered in Löchgau, Germany, and has an office in Detroit, USA, as well. Konzelmann develops polymeric components and systems for friction optimization as well as emission reduction. Its customers are major OEMs and Tier 1 suppliers in the automotive, medical and industrial sectors.

Konzelmann's experts follow a holistic approach to finding solutions: through intensive listening and many years of expertise in the development of special technical applications, individual solutions with a holistic view of product and process interfaces are created in exchange with the customer. The result is reduced production costs with superior product properties. Current examples include the in-house developed [KBerstring®](#), which enhances battery safety in the context of e-mobility; the internally clamped rectangular sealing ring [ID Sealing \(REDI\)](#), which can significantly reduce both leakage and friction torque; and the TÜV Süd-certified PURKON®2000 material, which provides comprehensive leakage protection in hydrogen applications. The in-house developed PURKON® materials – PURKON®2000, PURKON®2001, and the new PURKON®2080, PURKON®3000, and PURKON®4000 presented for the first time at IAA TRANSPORTATION 2026 – meet the highest material requirements and exemplify Konzelmann's application-oriented and forward-looking product development.

Further Information: <https://www.konzelmann.com/en/>

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About HYJOIN

hyJOIN® technology stems from a Fraunhofer innovation that was further developed by the SME Kist+Escherich. With the founding of hyjoin GmbH, HYJOIN combines decades of excellence in mechanical engineering with startup agility – enabling professional structures, international expansion and the access to new industries. The product portfolio ranges from hyJOIN® technology to machine and plant solutions based on it, all the way to high-quality processes for industrial applications. The focus is on industrialization: HYJOIN develops technologies into robust, certifiable solutions and supports their rollout in demanding applications – particularly in automotive and medical technologies.