

Electric cars need structurally sound fastening solutions

Battery Packs



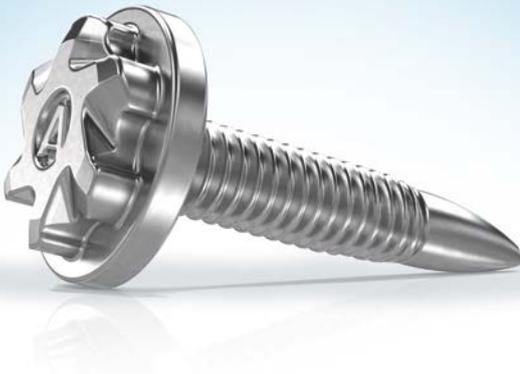
Picture 1: Electrification in the automotive industry places many new challenges on manufacturers and their suppliers. So ARNOLD offers some innovative joining concepts – for example for battery assembly. (Picture: ARNOLD UMFORMTECHNIK)

If developers and manufacturers of fasteners wish to succeed, they must face the issue of vehicle electrification. And it is a topic that ARNOLD UMFORMTECHNIK from Forchtenberg-Ernstbach in south-west Germany has been concerned with for some years. The company began solid and comprehensive work on customers' projects in this field back in 2016.

A spokesman said: „It was the technical progress we made with our Flowform[®] screw that quickly convinced our customers in this sector that enabled us to enter this market.“ Clean and reliable processing is the key feature of the thread-rolling fastener. But what lies behind designing fasteners for electric

vehicles? One thing is certain. Structurally sound fastening solutions are crucial. For example, in certain applications it is important that holes are blind, so that any of the tiny particles that inevitably arise during the screw-in process will be caught. It would, of course, be a disaster if a particle were

to fall from a through-hole onto a printed circuit board. Then again, there is electric current inside the battery area. That is why the material that the client uses, and the fastening solution tailored perfectly to it, play a major role. From ARNOLD UMFORMTECHNIK's perspective, drawing parts also represent an important aspect in developing and selecting the appropriate fastening solution. „Increasingly, turned parts are being used. Customers are often not aware that with the technology we have today it is possible to form even very complex parts such as sleeves or



Picture 2: Clean and reliable processing with Flowform[®] and Flowform[®] Plus screws from Arnold Umformtechnik (Picture: ARNOLD UMFORMTECHNIK)



Picture 3: Close-to-series action can be achieved under realistic conditions in the metal joining laboratory. Customers receive the screw parameters relevant to their specific application. (Picture: ARNOLD UMFORMTECHNIK)

individual drawing parts. In appropriate numbers this creates a technical and financial advantage," said a company spokesman.

Early collaboration facilitates the process

For the development engineers at ARNOLD UMFORMTECHNIK it is important to work with the client as early as possible in the pre-development process so as to ensure that they can give the expert advice on the fastening solution required. The fastening specialists are convinced that this is the only way to develop and design the optimal

component. And at the new metal joining laboratory in Dörzbach, fastening solutions can be tested under realistic conditions with close-to-series action. Customers receive the screw parameters relevant to their specific application. Besides the fastening solution and the metal joining laboratory tests, ARNOLD UMFORMTECHNIK's customers can also order the appropriate screw-driving technology, perfectly tailored and implemented – with the company's long-standing partners – for each application.

In the case of the battery pack ARNOLD UMFORMTECHNIK brings

the company's entire product range into play – Flowform[®] for the cover, Taptite[®], or even drawing parts, for various other fastenings. ARNOLD UMFORMTECHNIK's customers include OEMs and suppliers in the electric vehicle sector.

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The ARNOLD GROUP – BlueFastening Systems

With a foundation of many years of expertise in the production of intelligent fastening systems and very complex extruded parts, the ARNOLD GROUP has developed over a number of years into a comprehensive supplier and development partner for complex fastening systems. With our new positioning of "BlueFastening Systems" this development process will now continue under a united and harmonised structure. Engineering, fastenings, and functional parts, together with feeder processing systems, all from a single source – efficient, sustained and international.

Since 1994 ARNOLD has been part of the Würth Group.