ARNOLD®
BlueFastening Systems

Assembly efficiency with pre-assembled captive fastening systems

Picture 1: Wherever manufacturers install clamping parts or additional plastic components these pre-assembled fastening systems can substantially ease handling. (Picture: shutterstock-ID: 521437882 | © Be Yourself Stock Photos)

Lower assembly costs, fewer part types, and the trend towards fitting pre-fabricated components: there are many reasons for using pre-assembled fastening systems. Depending on the application concerned manufacturers can use different materials, and make use of detachable or permanent captive fastening systems.

In CapTec® ARNOLD UMFORMTECHNIK GmbH & Co. KG from Forchtenberg in Germany has developed a captive fastening system that can reduce assembly times, cut assembly costs, and simplify the assembly process. In doing so the company is reacting to the demand by the automotive industry to cut processing times.
Behind the brand name of CapTec® lies a range of captive pre-assembled fasteners or bolt-and-sleeve combinations that are fitted during final assembly, and that can be used in any application. The systems are based on standard fasteners from ARNOLD UMFORMTECHNIK's product range; these fasteners are adapted correspondingly to the tolerances required.
Two different versions are available for customer applications. The first version consists of a bolt-and-sleeve fastener, joined together by an additional element. A plastic ring acting as the additional element gives excellent flexibility and ensures that the component can be dismounted if a repair is needed. In the second lower-cost version the bolt and the sleeve are stamped together – no additional element is required.
Wherever manufacturers need to install clamping parts or plastic ancillary components these pre-assembled fastening systems can substantially ease handling and shorten processes. There are already several different applications. For example thermal

Picture 2: In a lower-cost version the bolt and the sleeve are stamped together – no additional element.
(Picture: ARNOLD UMFORMTECHNIK)

shields inside the engine compartment, cylinder covers, oil sumps, sensors and enclosures for electronic modules. Where overhead assembly is called for, pre-assembled fastening systems considerably ease the fitting process. Apart from efficient assembly, there are even more benefits to using captive fastening systems – fewer part types, a smaller supplier base, and easier small parts management, as well as a reduction in the overall cost of fasteners. And there is also the trend towards pre-fabricated component assembly and the desire to have "a single source system".
One thing is certain. Pre-fabricated components have the advantage that during final assembly they can be installed into a larger component as a unit – much faster and less complicated than dealing with lots of small parts. To be reliable in the assembly process, the parts all need to be precisely harmonised with one another ready for their future application.

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Die 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.