

Optimisation of the assembly

Besides a variety of hand tools for manual assembly, UK based company Avdel® offers assembly stations and automatic assembly machines for series production.

Avdel says that in these times of strong cost pressure these machines offer important benefits due to optimised assembly processes and the associated potential savings.

“Our approach is the assembly, because there is the largest potential for rationalisation. In fact the installed fasteners only have a relative small part in the total cost of the assembly.”

The assembly stations are either designed for single riveting or allow, as multi-head riveting station, the simultaneous fastening of multiple components in one operation. They are independent workplaces that can be integrated into existing processes. The high flexibility is due to the Avdel® platform strategy and the modular design. The conception for each application is carried out according to customer requirements. Depending on the application a variety of different riveting systems can be applied. Even a combination of blind riveting and self-pierce riveting systems is possible.

The single riveting stations are ergonomic small workplaces where the riveting tool can be operated suspended, in a linear moveable tool stand or built into the workplate. Actuation is feasible by hand release or by a foot pedal. Single riveting stations can be optionally designed as stand or seated workstation.

“Multiple riveting stations increase productivity and output by simultaneous installation of several fasteners. Compared to the

manual riveting the assembly is far faster. The user only handles the components, and integrated component fixturing provides a fast and exact positioning of the components. Twisting does not occur because all rivets are placed at the same time. Tolerances are maintained and finally the quality of the end product is increased. Due to the use of the quick Avdel® Speed Fastening® technology the assembly process obtains an additional optimisation.”

Avdel® automated assembly stations are designed for the use in automatic production processes. The machines are modular built and the single components are linked by flexible, plug-type connections. The rivets are transferred via the blow feed unit. During operation processing diagnostics of all functions can be provided by sensors. All parameters are shown on a clear and simple control display. The modular design allows a high reusability during component modifications or model change.

