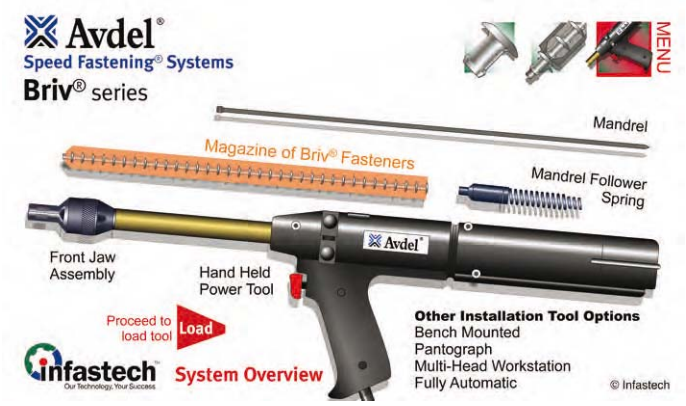
How To

Be More Environmentally Friendly By Eliminating Waste Rivet Stems From Your Assembly Line.

Waste minimization is the process of reducing the total waste output by an individual or corporation. Waste prevention, minimization and recycling is often associated with upfront investment, usually compensated by future savings. For the purpose of this how-to guide we will focus on one way to prevent unnecessary waste during assembly by replacing standard breakstem rivets with pull through technology, requiring minimal investment.

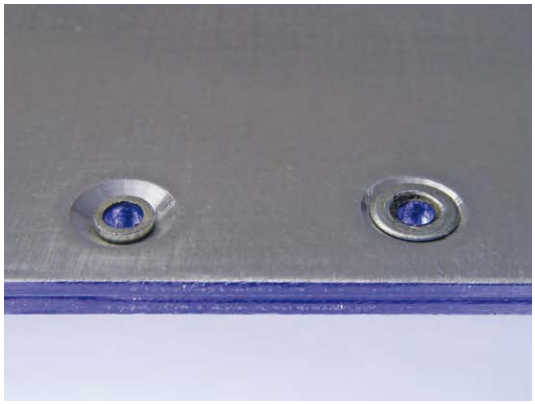


Speed Fastening® installation tooling used to install mandrel free rivets

The stem of breakstem rivets is mostly "waste" metal. Typically over 50% of the total rivet weight is thrown away, and in most cases the remaining stem portion after installation has little or no contribution to the joint strength.

For comparison purposes a standard breakstem rivet has a total weight before installation of 0.14oz (4.0g) and an installed rivet weight of 0.06oz (1.75g). The disposed of stem portion (0.08oz / 2.25g) therefore accounts for 56% material waste. In contrast the equivalent size pull through technology speed rivet weighs just 0.05oz (1.4g) and completely eliminates the waste portion of the stem by installing multiple rivets on a single, reusable mandrel.

Briv® speed fastener used predominately in light sheet metal assembly



DF Chobert® fastener eliminates rivet stems and creates a flush surface on the front and rear sheet

Rivscrew® speed rivets offer fast, mandrel free joining with the removability of a screw

By eliminating rivet stems, we can lower material and processing costs, reduce the weight of goods for transportation purposes and increase the number of pieces per carton. All of these factors offer significant environmental benefits over traditional breakstem rivets by reducing carbon emissions to produce parts and transport them to assembly lines, minimizing the amount of packaging used and

diminishing line-side waste to be disposed of by the customer. Additionally Speed Fastening® technology provides faster cycle and installation times, no risk of the stems loosening, rattling or falling out after assembly and greater throughput in assembly lines without compromising joint strength or rivet function.

Self-pierce riveting (SPR), which simplifies assembly by piercing and fastening in one operation, provides a further alternative to standard breakstem rivet assembly. Unlike conventional breakstem riveting, self-piercing technology does not require a predrilled hole and creates no waste material from disposable stems, further enhancing the possibilities for waste prevention and minimization.

Incorporating waste reducing rivet technology in your production line is not only environmentally friendly but has significant cost and production benefits as well. Fastener sizes range from 3/32" to ¼" and the technology is used extensively in the assembly of light fabricated materials. Infastech Product Marketing Manager Daniel Pilsworth believes the high suitability for use with automated assembly systems is another strong reason to look at alternative, more environmentally friendly assembly methods like speed and self pierce riveting.

For more information or help with any of the solutions mentioned above, please contact your local Avdel® representative.

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