

## NeoSpeed® Rivets: Faster, Stronger, Simpler

*Simplified yet versatile speed riveting system delivers widest grip range and hole size tolerance for high-speed assembly*

POP® Avdel®, the largest blind rivet supplier in the industry, is now offering a countersunk rivet head option to go with the more common mushroom style for use with its NeoSpeed Speed Fastening system. Countersunk rivets are particularly important for applications in which a raised head is not acceptable in the application.

These unique, splined, patent protected NeoSpeed rivets from POP Avdel deliver the widest grip range and hole size tolerances of any non-structural rivet, while delivering shear, tensile and clamp performance better than or equal to traditional breakstem options.

When used with appropriate installation tools, including a paper magazine of fasteners with a re-usable mandrel or pre-loaded rivets with disposable mandrel, assembly speeds can be improved by up to 400% compared to traditional threaded or breakstem fasteners.

The NeoSpeed repetition riveting system uses pull-through technology with a re-usable mandrel or a pre-loaded disposable mandrel (except for countersunk and A4 Stainless Steel) for installation. The eight axial splines of trapezoidal cross-section are precisely defined in form to permit variable “radial crushing” within the hole according to its size. Unconstrained, these splines can expand radially up to 5.9 mm.

During the placing operation, the splines at the tail end expand first and capture the rear sheet. Hole-filling then occurs within the joint. Finally, for final clamp load, the mandrel head completes the “head forming” action as it pulls through.

As a result, the rivet can fill out into bigger front sheet holes than rear, accommodate for misaligned holes, and potentially eliminate rattles and shear-slip – something that no other conventional blind rivet can do.

NeoSpeed fasteners have other advantages over conventional breakstem rivets; by eliminating the waste portion of the stem there are zero waste materials to dispose.

Furthermore, the installed rivets are typically half the weight – a critical consideration in many applications, including air and ground vehicles seeking to improve fuel efficiency.

With fewer failure modes than breakstem riveting, NeoSpeed fasteners enhance product quality and joint performance. The reliable rivet process minimizes the chance of jaw clogging, stem jams, metallic debris, as well as spent pintails dropped in the application.

Due to its versatility, the NeoSpeed line reduces system complexity, assembly and inventory costs, as well as streamlines inspection.

With three times greater hole size tolerance than standard breakstem rivets and an enlarged front sheet hole that minimizes misalignment issues, NeoSpeed fasteners are far less sensitive to application variations. Multi-grip capability further accommodates wide variations in material thickness so one rivet can be used to replace several standard grip fasteners.

Due to the broad grip range of the rivets, the product is available in just three rivet lengths per diameter. Only one mandrel is required per diameter as well, regardless of hole size variation. Custom rivet lengths can be developed to accommodate a specific grip range application, which are designed and optimized using class-leading finite element analysis techniques.

Compared to other speed fastening options, the NeoSpeed system reduces the required rivet types, mandrel sizes and nose jaws by roughly 3 to 1.

NeoSpeed rivets are available in aluminum, steel and A4 Stainless Steel (316) with various finishes. Head styles include mushroom and countersunk. Available sizes include 3.2 mm (1/8”), 4.0 mm (5/32”) and 4.8mm (3/16”). Additional sizes, materials and head styles are under development.

For the most common thin sheet metal joints where the individual sheet thickness is typically below 1.2 mm, a “short-grip” version is available that is lighter and costs less.

NeoSpeed fasteners are applicable for high speed fastening and component assembly in all major industrial markets, including automotive, heavy ground transportation, electronics, appliance, HVAC, solar, recreational equipment and more.

Pop Avdel is a division of STANLEY Engineered Fastening, a Stanley Black & Decker Inc. Company. STANLEY Engineered Fastening is the premier leader in the design and creation of unique assembly technologies, from concept through installation.

For more information, visit [www.StanleyEngineeredFastening.com](http://www.StanleyEngineeredFastening.com), or contact STANLEY Engineered Fastening in the U.S. at 4 Shelter Rock Lane, Danbury, Connecticut, 06810. Call 877.364.2781, or fax 800. 225.5614.