POP® Avdel®

Speed Fastening® Systems

Reduce Assembly Costs with the most effective blind fastening technology.

Holding your world together®

Speed fasteners

High precision, system-compatible function, ease of operation and quick processes are guaranteed because you can fasten continuously from magazine or bowl fed fasteners and place up to 60 fasteners per minute. For fast and reliable assembly processes.

Speed Fastening Systems can reduce assembly costs, shorten cycle times, increase productivity and reduce rework and other quality costs. Speed Fastening Systems are well suited for use in small, medium and large batch processes as well as continuous production lines.

Installation

For smaller batches, we offer a choice of power tools and simple assembly workstations. For larger batches, multihead systems offer a cost effective solution. For continuous flow lines, we have the technology to develop fully automated assembly systems.

Applications

Speed Fastening Systems can be used to assemble metal and plastics, composite material and electronic components. With an average cycle time of less than two seconds, these systems provide a fast installation from one side (blind).

Mission

Together with our customers, we develop blind fastening systems that simplify your production process and improve the quality of your products. In every case, we not only see ourselves as a provider of fasteners, tools and machines but as a development and system partner with the objective of helping our customers improve their assembly performance.

Speed Fastening® Systems

Speed Fastening is a unique assembly system designed for rapid and reliable fastening in medium and high volume applications. Originally designed for the aviation industry, Speed Fastening Systems are now used by many of the world's foremost manufacturing companies in sectors as diverse as household goods, lighting, electronic sub-assemblies, light metal fabrication and automotive. Speed fasteners are available in a wide range of materials, finishes, lengths and diameters and are ideal for fastening metals, plastics, composites and electronic components.

Speed fasteners are single piece fasteners which are either magazine fed or fed via a vibrating bowl to a wide choice of installation equipment. This ranges from the ultra-lightweight 753 power tool to fully automated, state of the art assembly systems.

Benefits of assembly

Increased manufacturing throughput

A Speed Fastening System can be fully optimised to give cycle times of less than two seconds. This rapid, blind sided process delivers a throughput up to four times greater than a traditional threaded or riveted solution.

Reduced component handling

The fasteners are fed via a magazine or into a bowl feeder. This eliminates the need for individual component handling, saves time and reduces the potential for operator injury.

No component spillage

Because the fasteners are captively held they will not be dropped onto the floor or into the application. This avoids wasted time and improves product quality while improving the work environment.

No stem loss

Traditional breakstem rivets all too often suffer from stem loss once installed. This can lead to application rattle, electrical short circuits or worse.
Speed fasteners have no stems.

Improved joint quality

Speed installation technology provides a consistent, repeatable joint. What's more, unlike threaded fasteners, there is no requirement for torque control – no more problems of stripped holes or loose joints.

Improved joint performance

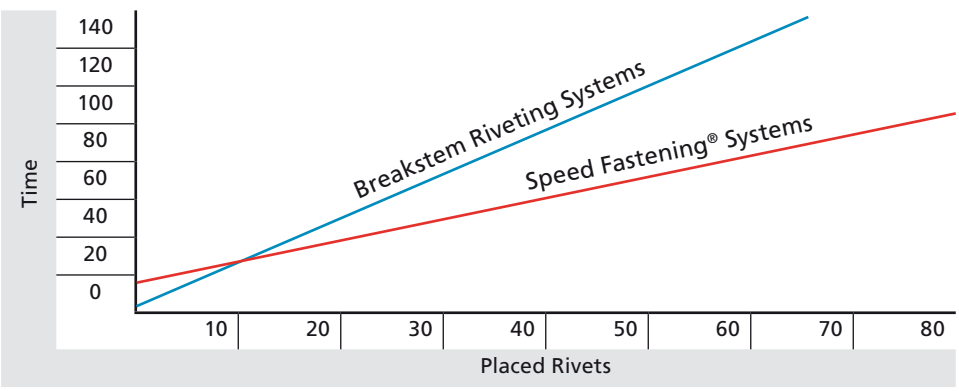
Once installed speed fasteners give excellent clamp up, shear and tension performance. They are also virtually immune from vibration loosening.

Process flexibility

Speed Fastening Systems can be used for low volume, off-line batch or jobbing shop work through to flow line processes. From hand held power tools to multi-headed modular workstations, we can design a Speed Fastening System to suit your assembly requirements. A wide variety of products in many industries are assembled with these systems including automotive, electronics, domestic appliance and general industrial.

Time Analysis

Speed Fastening is the more efficient system after only 10 placed rivets.



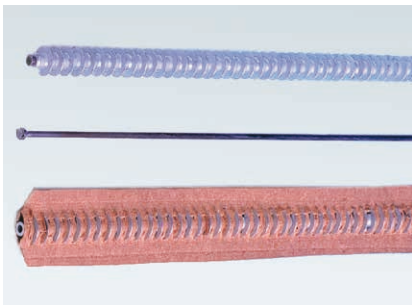
Range Overview

Brand	Material	Key features
NeoSpeed® 	Aluminium Alloy Steel Stainless Steel A4	Wide grip range High joint clamp Hole filling Very high strength
Briv® 	Aluminium Alloy Steel Stainless Steel A2 Brass	Bulbed tail form Large headform High joint clamp Good joint gap closure
Rivscrew® 	Steel	Threaded fastener Removable with hex key and reusable Fastens into materials up to Vickers hardness 105 Hv5
Chobert® 	Aluminium Alloy Steel Brass	Internal tapered bore Controlled clamp High shear Ideal for soft and brittle materials
Double Flush Chobert® 	Steel	Flush surface on both sides of the joint Reduces excess space requirements within the chassis
Grovit® 	Aluminium Alloy Steel	Designed for blind hole applications Annular grooves on body For use in wood, plastics, fibreglass and aluminium
Avtronic® 	Brass Aluminium Alloy	Attaches DIN 41612 connectors and other components to PCBs Annular grooves on body
Avsert® 	Brass	Threaded stand-off pillars for PCBs Internally threaded bore Many stand-off heights
Avlug® 	Brass	Solderable terminal posts for PCBs Rolled/knurled shank

Assembly with standard tool

Fasteners fed via a vibrating bowl

Magazine fed fasteners



Specifying a Speed Fastening® System

To optimise the performance of your Speed Fastening System, it is important to select the correct combination of fastener, nose equipment, mandrel and follower spring. It is also critical to ensure that the combination selected is suited for use with your choice of installation process. If you need any help in specifying the required components, do not hesitate to contact your local STANLEY Engineered Fastening representative. Further information on corrosion, safety and RoHS can be found on our website www.StanleyEngineeredFastening.com.

Fastener Selection

Standard Fasteners

Removability

Rivscrew® fasteners are ideal for applications requiring disassembly for repair or rework. They can simply be unscrewed using a standard hexagonal allen key.

Clamp

Briv® fasteners should be specified in applications requiring high clamp loads. NeoSpeed® fasteners combine high clamp throughout a wide grip range. Chobert® fasteners provide a lighter, controlled clamp making them ideal for softer or low strength materials.

Head Style

Fasteners are available with dome head. NeoSpeed®, Briv® and Chobert® are also available with countersunk head style. Other head diameters may also be available as specials – please contact your local STANLEY Engineered Fastening representative.

Specialist Fasteners

Avtronic®

Designed for attaching DIN and other connectors, card ejectors and heatsinks to printed circuit boards.

Avsert®

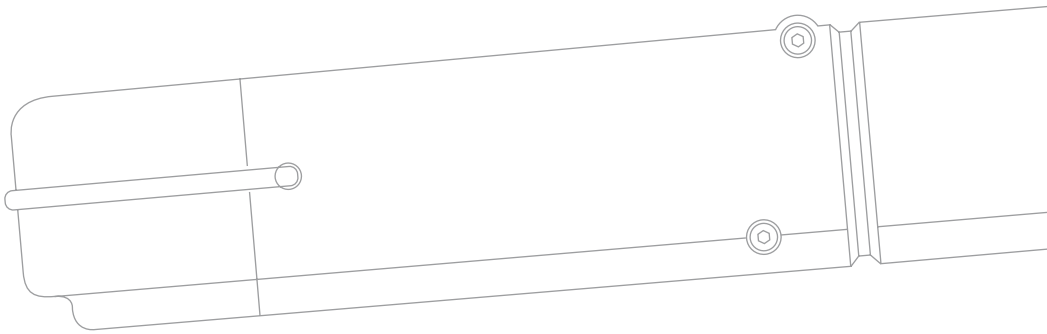
Cost effective stand-off pillars for printed circuit boards.

Avlug®

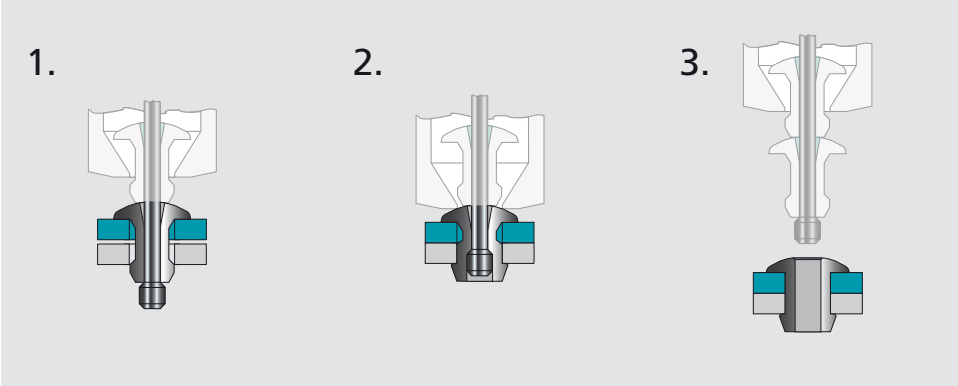
Cost effective terminal posts for printed circuit boards.

Fastener Material & Surface Finish

Speed fasteners are available in Stainless Steel, Steel, Aluminium and Brass. The choice of material should be made on the basis of performance (shear and tensile strength), suitability for use with the parent material and corrosion resistance. For performance data please see the relevant technical data sheets.



Typical placing sequence



1. The mandrel with pre-loaded fastener is located in the hole.

2. Tool activation pulls the mandrel through the fastener, expanding it within the hole to provide high clamp and secure joints.

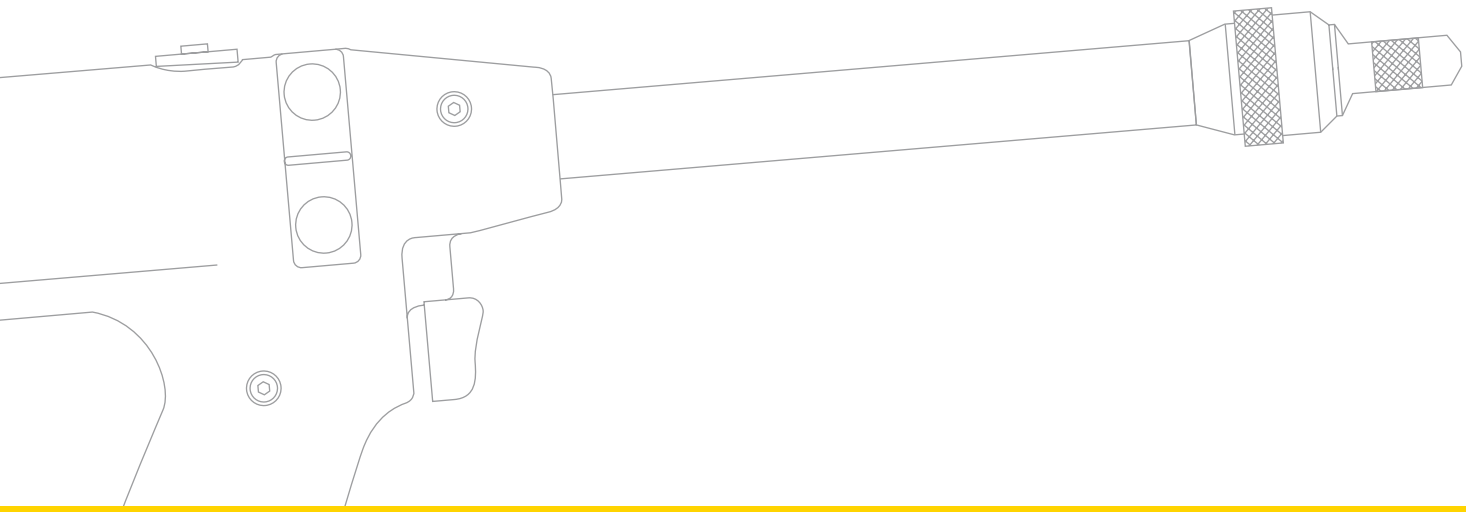
3. At the end of the installation cycle, the next fastener is automatically delivered to the nose of the tool, ready to repeat the assembly process.

Please visit our website www.StanleyEngineeredFastening.com for fastener placing animations.

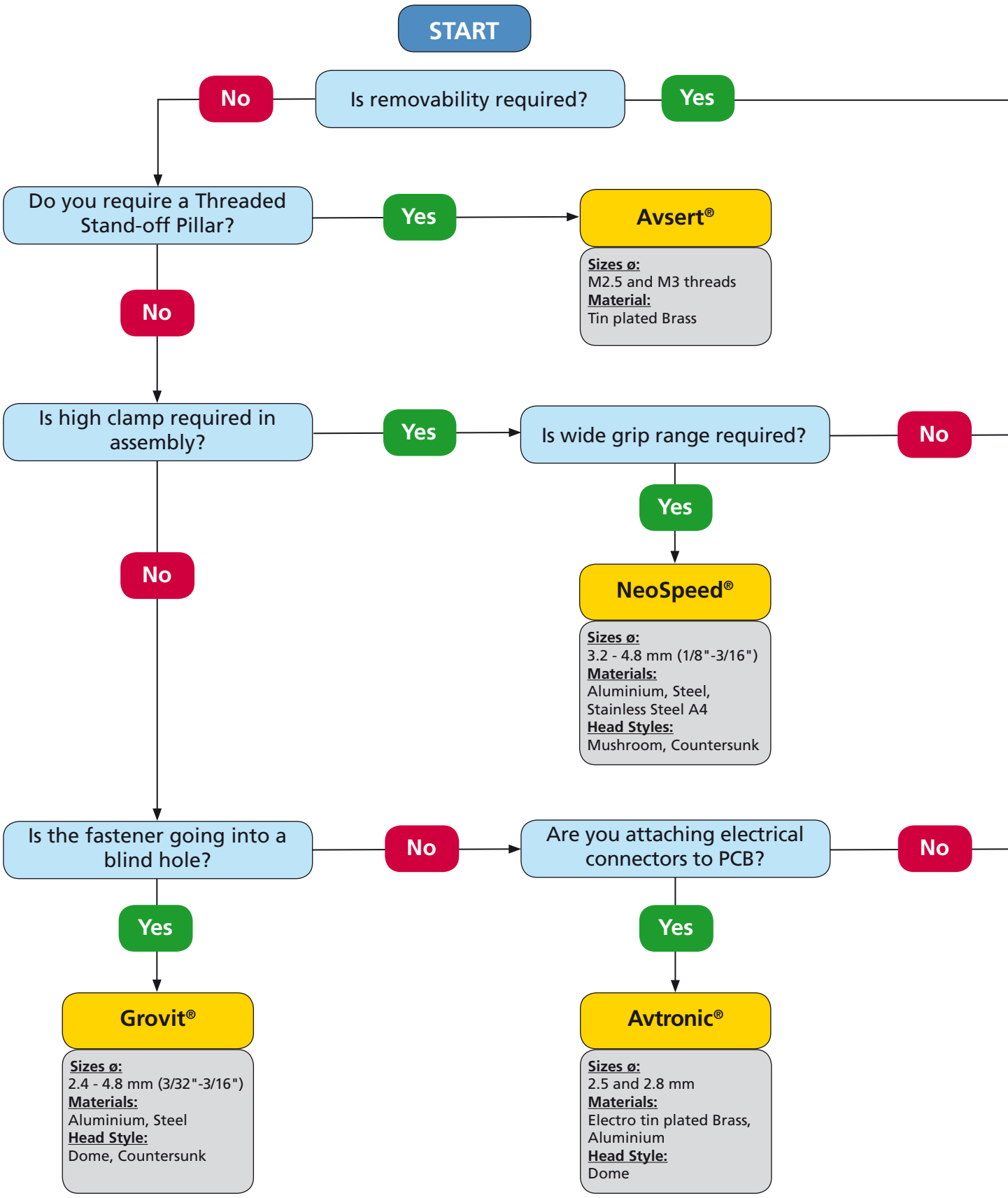
The surface finishes for our speed fasteners are as follows:

Steel	Zinc plate and clear passivation Option: Epoxy paint Zinc-nickel (with clear or black passivation) Organic coatings
Aluminium Alloy	Natural Option: Anodising (clear or colour dyed) Epoxy paint
Stainless Steel	Passivated
Brass	Brightened Tin plated (for solderability)

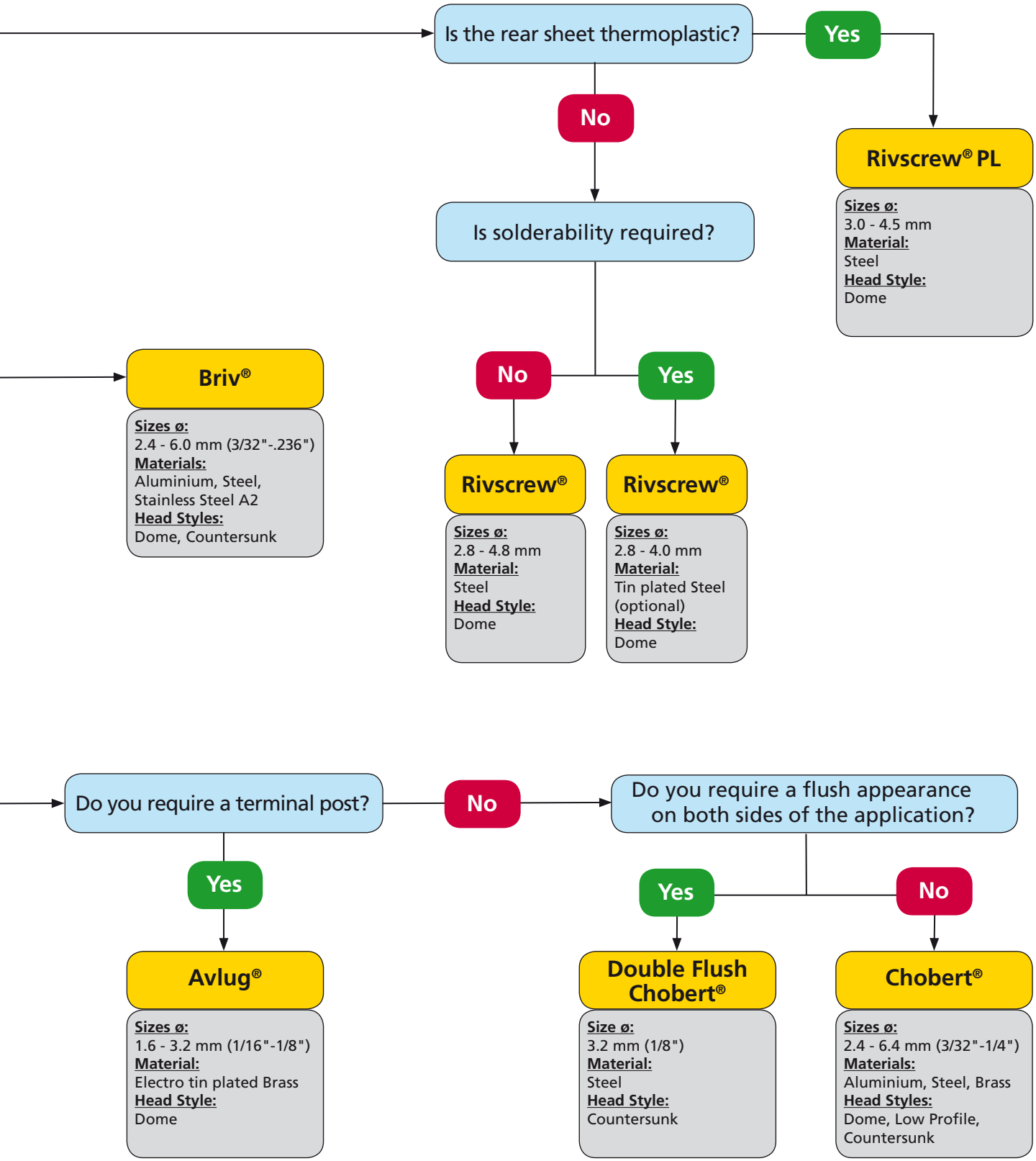
Almost all our fastener families may be specified with alternative surface finishes to provide increased corrosion resistance or a specific colour to suit your special application.



POP® Avdel® Speed Fastening® Systems



This selection guide is designed to illustrate which fasteners may be the most suitable for your application. This guide does not include the full range of POP Avdel products; our Applications Engineers are available to advise as to the best solution for your specific application needs.



Selection Guide

This table is designed as a guide to help you select the most suitable speed fastener for your particular application. Full technical and performance data for each speed fastener can also be found on our website or contact your local representative.

Product Range	Material						Finish							Head Style			Fastener Size (nom)												Series	Page	
	Aluminium 2.5 % Mg	Aluminium 3.5 % Mg	Aluminium 5 % Mg	Steel	Stainless Steel	Brass	Natural	Zinc plated	Polished/bright	Passivated	Tin plated	Nickel plated	Anodysed red	Dome	Low profile	Countersunk	1.6 mm (1/16")	2.4 mm (3/32")	2.5 mm	2.8 mm	3.0 mm	3.2 mm (1/8")	3.5 mm	4.0 mm (5/32")	4.5 mm	4.8 mm (3/16")	6.0 mm	6.4 mm (1/4")	M2.5	M3		Description	Data Sheet
NeoSpeed®			●				●							●								●		●		●					57101	11	28
				●				●						●								●		●		●					57121	11	30
					●					●				●										●		●					57141	11	32
				●				●								●						●									57221	11	33
Briv®			●				●							●				●				●		●		●	●				1801	12	36
			●				●									●						●		●							1802	12	38
			●										●	●				●				●		●		●					1804	12	36
				●				●						●								●		●		●	●				1821	12	39
				●				●								●						●		●							1822	12	41
						●			●					●				●				●		●		●					1831	12	42
						●					●			●				●				●		●		●					1833	12	42
					●				●					●								●		●		●					1841	12	44
	●						●							●								●		●		●					1861	12	36
Chobert® Double Flush Chobert®				●				●						●								●		●		●		●			1121	13	45
				●				●								●						●		●		●		●			1122	13	47
	●						●									●		●				●		●		●		●			1124	13	51
	●						●							●				●				●		●		●					1125	13	49
		●					●							●				●				●		●		●		●			1131	13	49
		●					●									●		●				●		●		●		●			1132	13	51
			●				●							●				●				●		●		●		●			1135	13	49
			●				●									●						●		●		●		●			1136	13	51
						●			●					●				●				●		●		●					1141	13	53
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						●						●				●		●				●		●		●					1148	13	53
	●						●								●							●		●		●					1162	13	55
	●						●							●							●									1164	13	56
				●				●								●						●									1110	14	57
Grovit®				●				●						●								●		●		●					1101	15	58
	●						●							●				●				●		●		●					1103	15	59
	●						●									●		●				●		●		●					1104	15	59
Rivscrew® Rivscrew® PL				●				●						●						●	●		●	●							1722	16	64
				●							●			●						●	●		●	●							1723	16	64
				●				●						●												●					1733	16	66
				●				●						●						●	●		●	●							1772	16	67
				●				●						●							●		●	●	●						1742	17	68
Avtronic®						●					●			●					●	●											1188	18	72
			●				●							●					●	●											1189	18	73
Avset®						●					●																		●	●	1117	19	76
						●					●																		●	●	1118	19	77
Avlug®						●					●			●			●	●				●									1107	20	79

Rivscrew® Threaded, Removable Fasteners

Threaded, removable speed fasteners that combine the speed of rivet placement with the removability of a screw.

Key features and benefits

- Expands radially during installation to form a thread in host material, eliminating the risk of over torquing and strip-out
- Placed using a hexagon mandrel which expands the threaded diameter radially, adjacent to its six corners
- Removable for servicing with a hex key and reusable
- Providing a higher vibration resistant "thread lock" in the parent material compared to standard screws
- Can be used to fasten most materials up to Vickers hardness 105 Hv5
- Eliminates the need for costly tapping or thread-forming operations
- Bright tin plated steel option for ease of soldering and good electrical conductivity
- Can be bowl fed for larger volume applications using automated equipment

Specifications

Sizes:

2.8 mm to 4.8 mm

Materials:

Zinc plated steel

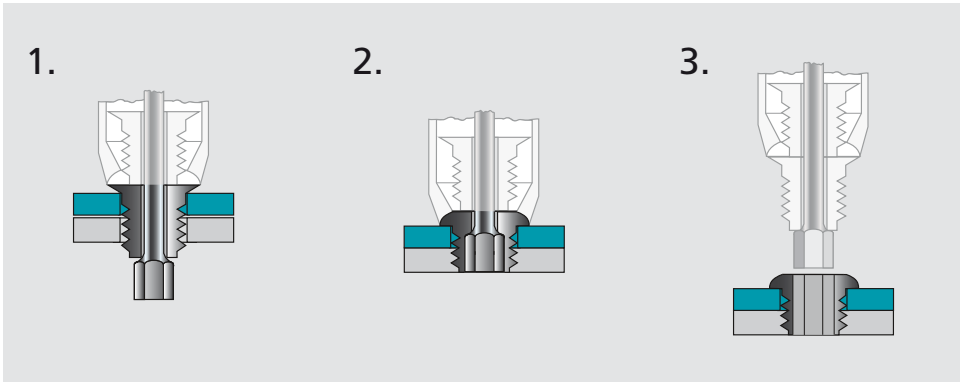
Optional: tin plated

Head Style:

Dome*

*The placed head style depends on the nose equipment used, standard Rivscrew nose equipment gives a dome head style.

Typical placing sequence

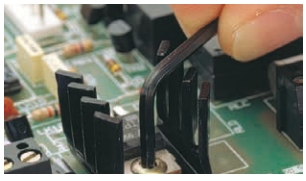


Please visit our website www.StanleyEngineeredFastening.com for fastener placing animations.

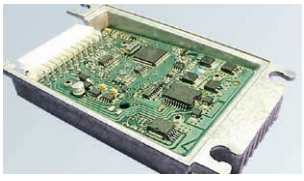
Assembly applications

- Aluminium die-cast boxes
- Cast magnesium
- Semi-conductors to thin wall and extruded heatsinks
- Semi-conductors to PCBs
- PCBs to chassis assemblies
- Fastening into injection moulded plastic bosses
- General engineering involving plastics, nylon, polycarbonate etc.

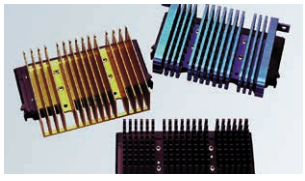
Rivscrew® is removable and reusable



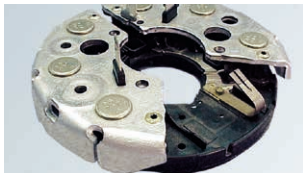
Automotive die-cast chassis with PCB



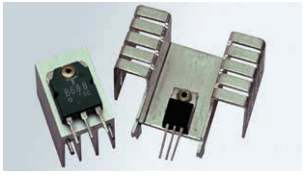
Heatsinks to processor cartridges



Alternator diode plate to nylon moulding



Semi-conductors to heatsinks and printed circuit boards



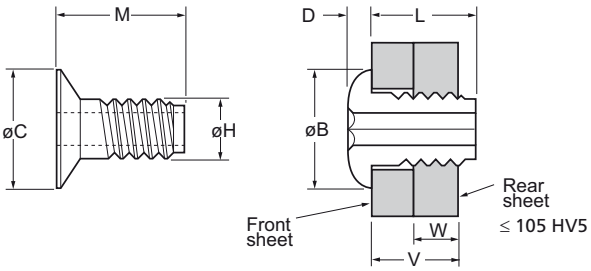
Seat belt tensioner

Rivscrew® 1722 / (1723) Series
Steel

English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Low carbon steel*	Acier à faible teneur en carbone*	Stahl*	Acciaio a basso tenore di carbonio*	Acero bajo en carbono*
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Clear trivalent passivated	Passivation claire trivalente	Klar chromatiert, Cr6-frei	Passivazione chiara trivalente	Pasivado claro trivalente

* : BS 3111 Type 0, SAE 1008, DIN 1654 Qst 34-3

Optional on request / sur demande / auf Anfrage / su richiesta / bajo petición:
Tin plated: replace part no. 01722 with 01723. / Etamé: remplacer la série 01722 par 01723. / Verzinnt: ersetzen Sie 01722 durch 01723. Stagnato: sostituire 01722 con 01723. / Estañado: cambiar 01722 por 01723.



ø	øH	Front sheet pièce à fixer / oberes Bauteil / piastra frontale/ pieza anterior		Rear sheet pièce support/ unteres Bauteil/ piastra poste-riore / pieza posterior		øC	M	W	V	øB[1)]	D[1)]	L	Fasteners per pod Nombre de rivets par chargeur/ Niete pro Magazin/ Rivetti per caricatore / Uds./carga	Part No/ref
nom.	max.	min.	max.	min.	max.	max.	max.	min.	max.	max.	max.	max.	± 1	
2.8	2.6	2.95	3.02	2.62	2.70	5.9	5.2	1.62	2.85	6.1	1.4	4.0	62	01722-02806
							6.2		3.85			5.0	52	01722-02807
							7.2		4.83			6.0	43	01722-02809
							8.2		5.82			7.0	38	01722-02810
							10.1		7.80			9.0	30	01722-02812
3.0	2.8	3.07	3.15	2.82	2.89	5.9	5.2	1.62	2.85	6.1	1.4	4.0	62	01722-03006
							6.2		3.85			5.0	52	01722-03007
							7.2		4.83			6.0	43	01722-03009
							8.2		5.82			7.0	38	01722-03010
							9.2		6.81			8.0	34	01722-03011
							10.1		7.80			9.0	30	01722-03012
							13.1		10.72			11.9	23	01722-03016

all dimensions in mm / en milimètres / alle Maße in mm / in millimetri / en milímetros

1) Dimensions B and D are generated during the installation process and should only be used as an indication of the minimum space required.
Les cotes B et D ne sont données qu'à titre et représentent l'encombrement maximal de la tête du Rivscrew après pose.
Maße B und D werden während der Verarbeitung erzeugt und sollten nur als Anhaltspunkt für den minimalen Platzbedarf verwendet werden.
Le dimensioni B e D sono generate durante il processo d'installazione e devono essere usate solo come un'indicazione del minimo spazio richiesto.
Las dimensiones B y D se conforman en el proceso de colocación y deben tomarse como orientativas para comprobar el espacio mínimo necesario.