Blind Threaded Inserts



Holding your world together™



Easily adaptable for your materials and production processes

Everywhere that you need to join components reliably and efficiently Avdel[®] offers intelligent fastening systems and the most suitable installation tools and assembly stations.

Wherever you need high quality, load bearing threads in thin materials, the Avdel[®] Blind Threaded Insert System offers the ideal solution.

Quickly and reliably installed without rework or damage to the parent application, even with painted sheet materials and tubes where there is no blind side access.

Avdel[®] threaded inserts are most commonly used in the automotive, vehicle, electronics chassis manufacturing, equipment manufacturing and shipbuilding industries. The wide variety of Avdel® threaded inserts provides perfect engineering results and economic solutions in every application.

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

Contents Page

	The Range of Avdel [®] Blind Fastening Systems	27
Installation Equipment	Assembly Workstations	24
	Assembly Applications	23
	Automated Assembly Systems	22
	Handtools	20–21
	Installation Tools	19
Threaded Inserts	Versa-Nut®	17
The Range of Avdel®	Squaresert®	16
	High Strength Hexsert®	15
	Hexsert [®] /Euro Hexsert [®]	14
	DK/DL	13
	Nutsert [®] /TSN [®]	12
	Eurosert®	11
Overview	Selection Guide	10
	Design Parameters	9
	Selecting a Threaded Insert	8
	Customised Designs	7
	Design Features and Benefits	6
	Benefits of Assembly	5
	Avdel [®] Threaded Inserts	4



 \frown

Avdel[®] Threaded Inserts

Avdel[®] threaded inserts and installation tools provide a quick, reliable and low cost system of inserting high quality, load bearing threads in thin gauge materials. Avdel[®] threaded inserts offer many benefits over nuts and bolts, weld nuts, self-tapping screws and pressed inserts.

Benefits of Assembly

Blind sided assembly

Access is needed to only one side of the workpiece. This results in increased speed of assembly, lower assembly costs, reduced operator error and is ideal for assembly of box or closed sections.

Purely mechanical fastening

Avdel[®] threaded inserts can be used to join dissimilar materials. They avoid damage of surface coatings and thus can be installed in pre- as well as in post finished applications. The workpiece is not affected by a welding process.

Designed for rapid rate of installation

The typical assembly cycle of 3 seconds reduces assembly time and costs.

Designed for automation

Avdel® threaded inserts can be installed fully automatically resulting in a high speed and precision assembly. The set up costs are lower compared to welding equipment.

Forms a permanent fixture in material Avdel[®] threaded inserts deliver a vibration resistant joint without requiring maintenance.

Multi-functional fastener

Threaded inserts feature multi functions: they provide a female thread in sheet while giving the opportunity to clamp two or more sheets at the same time; can act as a spacer – resulting in fewer components required.

Suitable for a wide range of installation tools The facilities of installation range from hand tools for small batch and repair work and pneumatic tools for medium volume up to full automation for in-line assembly.





Benefits of Assembly

Automotive

- Clamps securely into parent material giving high resistance to vibration and attendant loosening of joint
- Ideal for joining dissimilar materials (e.g. aluminium to plastic sections) in addition to providing a female thread
- Particularly suitable for installing threads into closed sections where there is no access to blind side
- Available in high corrosion resistant coatings such as zincnickel to conform to increasing corrosion warranty periods
- Lower cost and less hazardous alternative to weld nuts, with far less damage to parent material

- Can easily be installed after paint finish is applied to avoid clogging threads, unlike weld nuts
- Quick and flexible placement possible in confined areas using hand tools
- Will not deform, distort or damage parent material, even if this is painted prior to installation
- Colour of insert can be modified to match parent material or improve appearance of assembly

Electronic and Electrical Equipment

- Closed end inserts prevent ingress of water and foreign bodies into electrical circuits
- No risk of nuts coming loose or falling on to circuitry
- Inserts can act as an earthing point
- Forms permanent fixing in parent material allowing easier panel removal and replacement compared to nut and bolt fixings
- Multi-functionality of thread, rivet and flange-spacer combined, offers space and weight advantages over other attachment methods

Speaker systems



Process Automation

- Ease of hole entry afforded by the reduced tail end diameter of Avdel inserts improves suitability for automatic placing
- Autosert[®] machines can place up to 20 inserts per minute using a single placing head
- Automation improves control of placing, removing risk of operator error
- Ideal for labour intensive and highly repetitive placing sequences
- Autosert[®] machines are capable of inserting several inserts simultaneously offering a significant reduction in process time

4 Autosert[®] automated assembly systems



Design Features and Benefits

Design Feature	Design Benefits	Typical Applications
Splined Body	 Improves torque-to-turn resistance in softer materials such as aluminium when compared to plain body inserts Improved electrical continuity in sheet metal fixings 	 Soft materials such as aluminium, magnesium, plastics, composites and wood Earthing points in electrical assemblies
Hexagonal Body	 Hexagonal section and bore improves torque- to-turn in components via form lock when compared to round and splined inserts 	 Automotive chassis components requiring high resistance to turning under vibrating loads Where high bolt removal torque is required during servicing (e.g. switchgear cabinets) Thermal applications prone to high expansion and contraction in parent material
Square Body	 Square section and bore improves torque-to- turn in components via form lock due to even greater contact surface compared to round and splined inserts Increased hole punch life compared to hexagonal geometries 	 Automotive body mountings requiring maximum turning resistance Soft material constructions, particularly for plastics, composites and soft sheet metals
Large Flange	 Provides large load bearing surface Reinforces hole, preventing push through Potential to use flange as a spacer Can be used with underhead seal (e.g. Rimlex[®]) 	 Load bearing applications in thin sheet and soft material applications Mountings where high push-out resistance is required (e.g. adjustable foot mountings)
Low Profile	• Near flush installation and clamp up	 Flush fitting, thin sheet, low load bearing applications (e.g. domestic appliances and coach building)
Countersunk	• Flush installation and secure clamp up	• Flush fitting, thin sheet, low load bearing applications (e.g. domestic appliances and coach building)
Closed End	 Prevents ingress of dirt and fluids into thread Prevents ingress of water and foreign bodies into electrical circuits 	 Electrical assemblies to prevent foreign bodies being inserted through open thread Load bearing sections to avoid thread exposure With underhead seal (Rimlex[®]) to prevent ingress of fluids and dirt into protected environment (e.g. fuel tank)
Reduced Tail End Diameter	 Ease of hole entry Particularly suited for automation 	Automated feed systemsRapid manual assembly
Increased Thread Strength	 Improves the maximum torque capability by typically 100% compared to standard Hexsert[®] No risk of thread-stripping insert, avoiding expensive and time consuming re-work Potential to downsize insert and screw diameter for a given joint clamp load 	 Structural automotive fixings into closed aluminium extrusions and hydro-formed steel tubes High strength threads into thin, hardened steel pressings unsuited to welding Any application where routine screw removal and re-tightening without torque control is likely
Slotted Body	• Forms four folded legs providing an extra large blind side bearing area	• Use with composites and plastics, reducing risk of cracking around the hole

•

Customised Designs

Modified Feature	Typical Uses and Benefits									
Flange Diameter	 Greater diameter increases push-out force and hole reinforcement in soft and thin gauge metals 									
Flange Thickness	• Thicker flange acts as a spacer and provides a slight increase in push-out force									
Nut Length	 Greater length acts as a blind side spacer and increases thread strength 									
Body Diameter	 Greater body diameter increases thread strength, torque-to-turn and push-out force Particularly suitable where the designer wishes to retain a large hole size for a small thread 									
Grip Range	 Increase in grip is required to accommodate thick wall construc- tions such as those using aluminium, magnesium, plastics and composites 									
Special Cold Formed Products	 In high volumes, these can offer significant cost savings compared to equivalent machined components Designs possible to very high tolerances for use with your own tooling 									
Coatings	• Special finishes can improve corrosion resistance, appearance and colour match with parent materials									
Surface Hardening	• Treatments such as nitriding increase thread torque strength									
Closed Ends and Underhead Seals	• Provides maximum protection against the ingress of moisture and dirt									
Thread Forms	• We can offer a wide range of metric and imperial thread forms to suit your application, including UNC, UNF, BSW, BSF, BA and fine series metric threads									

Selecting a Threaded Insert

Selecting a threaded insert is a simple process. The six factors detailed below are designed to help you identify an insert suitable for your application:

Thread size

Avdel[®] threaded inserts range from M3 to M12 thread sizes dependent upon the insert. Imperial threads are also available – please refer to page 10.

Grip range

The threaded insert should be selected to ensure that the thicknesses of the parent material(s) falls within the grip range.

Hole size

This is specified on the relevant technical data page for the insert. Allowance for coating the parent material should be made to avoid an undersized hole.

Torque-to-turn

Resistance is dependent upon the body shape and increases in the series: round, splined, hexagonal and square. Please refer to page 9 for further information.

Special features

Additional features such as low profile, large flange, closed end and countersunk are available within the standard range of products. Please refer to page 7 for details on special features and finishes.

Corrosion resistance

The selection of the material type and coating of the threaded insert should be made on the basis of the corrosion resistance required. Important Information The information on this page should be used in conjunction with the technical data available on our website www.avdel-global.com where you can also find additional information about corrosion, safety and RoHS.

Design Parameters





These figures represent typical values for M6 1st grip inserts placed in mild steel sheet. Actual values in customer's application will vary according to sheet material and its thickness and the proximity of the insert to strengthening or supporting structures.



Influence of Surface Finish on Corrosion Resistance

The above table is based on data derived from Salt Spray tests in accordance with ASTM B 117 using 5% sodium chloride fog. The ranking of surface finishes shown in the above table has been obtained from these tests. These are carried out under standard conditions using sodium chloride solution fog as a means of comparing the potential corrosion resistance. The conditions in all other applications are often different and could affect the comparative ranking. In particular, if dissimilar metals are involved the subsequent galvanic action can influence the rate and nature of corrosion. The ranking shown is based on the time of appearance of red rust but the same overall pattern is true for time of onset of white rust. Salt Spray tests are less applicable

The ranking shown is based on the time of appearance of red rust but the same overall pattern is true for time of onset of white rust. Salt Spray tests are less applicable to stainless steel, but its inclusion in the table serves to illustrate its increased inherent corrosion resistance. We would be happy to discuss the requirements for your particular application and to assist you in selecting the most appropriate finish.

Selection Guide

This table is designed as a guide to help you select the most suitable Avdel[®] threaded insert for your particular application. Full technical and performance data for each threaded insert can be found on our website or contact your local Avdel representative.

Product Range	Body Shape	Ma	ater	ial	De	esig	n Fe	atu	res	Ho Sia	ole zes	le Thread Size																		
		Aluminium	Steel	Stainless Steel	Closed End	Open End	Large Flange	Low Profile	Countersunk	Metric	Imperial	M3	M4	M5	M6	M8	M10	M12	6-32 UNC	8-32 UNC	10-24 UNC	10-32 UNF	1/4-20 UNC	1/4-28 UNF	5/16-18 UNC	5/16-24 UNF	3/8-16 UNC	3/8-24 UNF	Series No.	Page No.
rt®	*		•			•	٠			•		•	٠	•	٠	٠	•												9408	
rose				•		•		٠		•			٠	٠															39002	11
En	*		٠			٠		٠		•			٠	٠	٠	٠	٠												39006	
				•		•		•			•	•	٠	•	٠	•	•												9468	
			٠			•		•			٠	•	٠	•	٠	•	•												9658	
			٠		•			•			٠		•	•	•	•													FS38	
			٠		•		٠			•			٠	•	٠	٠													FS58	
® N		•				•	٠			•		•	٠	•	٠	٠	٠												FW78	
®/T5		•				•			٠	•		•	٠	•	٠	•	٠												FW96	10
sert		•				•		•		•			٠	•	٠	•													GM17	12
Nut		•			•				٠	•			٠	•	٠	٠													GM57	
		•			•		٠			•		•	٠	•	٠	•													GM68	
			٠	•		•		•			٠												٠		٠		٠		9654	
			•	•		•		٠			٠								٠	٠	٠								9655	
			•			•		•			•										٠								9665	
		•				٠		٠			•		•	٠	٠	٠	٠		•	٠	٠	٠	•	٠	٠	٠	٠	٠	DKA	- 13
ЪГ			•			•		٠			•		•	•	•	٠	•		•	•	٠	•	•	٠	٠	•	٠	٠	DKS	
DK/		•				•	٠				•		•	•	٠	٠	٠		•	٠	٠	•	•	٠	٠	•	٠	٠	DLA	
			٠			٠	٠				•		٠	•	٠	•	•		•	•	•	•	•	•	٠	•	٠	•	DLS	
			•			•	٠			•			•	•	٠	٠	•	•											9498	
®/ iert®			•			•		•			•	•	•	•	•	•													9688	
(sert Hexs			•			•		•		•			•	•	•	•	•												39101	14
Euro				•		•		•		•					٠														39102	
			٠		•		٠			•					•	•													49141	
High Strength Hexsert®			•			•	•			•					•	•	•	•											39301	15
Squaresert®			•			•		•		•				•	•	•													GK08	16
Versa-Nut®			•			•	•				•		•	•	•	•													VN21	17

Our policy is one of continuous product development and improvement and we reserve the right to change the specification of any product without prior notice.

Eurosert®

Steel inserts designed to provide load bearing threads in thin sheet materials. For hard metric hole sizes.

Key features and benefits

- Can be used in very thin sheet materials from 0.25mm (0.01")
- Double diameter body and lead-in chamfer provide easy insertion into hole
- Various platings available to increase corrosion resistance
- Splined body improves torque-to-turn resistance in softer materials such as aluminium when compared to plain body inserts and improves electrical continuity in sheet metal fixings
- Low profile head allows near flush fit to application
- Large flange head provides a load bearing surface and reinforces the hole to prevent push-out. Can be used as a spacer and can be supplied with an underhead seal.
- Can be used with hand tools, pneumatic tools and fully automated machines to suit a wide range of assembly methods

Specifications

Typical placing sequence

Thread Sizes: M3 – M10 Material: Steel Headforms: Low profile and large flange Body: Round, with or without splines Hole Size: Metric Please visit our website w



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

- Automotive
- Electrical engineering
- Electronic components
- Sheet metal
- Domestic appliances
- General light fabrication





Nutsert[®]/TSN[®]

Steel, stainless steel or aluminium inserts designed to provide load bearing threads in thin sheet materials.

Key features and benefits

- Can be used in very thin sheet materials from 0.50mm (0.02")
- Various platings available to increase the corrosion resistance
- Low profile head allows near flush fit to application
- Large flange head provides a load bearing surface and reinforces the hole to prevent push-out. Can be used as a spacer and can be supplied with an under-head seal
- Closed end prevents the ingress of dirt and fluids into thread and electrical circuits
- Can be used with hand tools, pneumatic tools and fully automated machines to suit a wide range of assembly methods

Specifications Typical placing sequence

Thread Sizes:

M3 - M12, 6-32 UNC, 8-32 UNC, 10-24 UNC, 1/4-20 UNC, 5/16-18 UNC, 3/8-16 UNC Materials: Steel, stainless steel, aluminium Headforms: Low profile and large flange Option: Closed end Hole Size: Mainly imperial. Soft metric for large flange options



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

- Automotive
- Electrical engineering
- Electronic components
- Sheet metal
- Domestic appliances
- General light fabrication





DK/DL

Steel or aluminium inserts designed to provide load bearing threads in thin sheet materials.

Key features and benefits

- Can be used in very thin sheet materials from 0.50mm (0.02")
- Wide grip range provides a placing capability in material thickness ranging from 0.5 mm (.02") up to 7.9 mm (.312")
- Splined body provides increased torque-to-turn resistance over conventional non-splined inserts
- Low profile head allows near flush seating without special hole preparation

Specifications Typical placing sequence

Thread Sizes:

M4 - M10, 6-32 UNC, 8-32 UNC, 10-24 UNC, 10-32 UNF, 1/4-20 UNC, 1/4-28 UNF, 5/16-18 UNC, 5/16-24 UNF, 3/8-16 UNC, 3/8-24 UNF Materials: Steel, aluminium Headforms: Low profile and large flange Body: Splined Hole Size: Imperial



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

- Automotive
- Electrical engineering
- Sheet metal
- Domestic appliances
- General light fabrication





- Large flange version provides a large bearing surface which increases push-out performance
- Reduced tail end diameter offers ease of hole entry

Hexsert[®] and Euro Hexsert[®]

Inserts with hexagonal body, providing high torque-to-turn and pull-out performance, particularly in soft metals.



Key features and benefits

- · Hexagonal section and bore improves torque-to-turn in components via form lock when compared to round and splined inserts
- Superior pull-out performance
- Can be used for very thin sheet materials from 0.50 mm (0.02")
- Double diameter body and lead-in chamfer provide easy insertion into hole
- Access needed from only one side of the application, for high speed assembly
- Various platings available to increase corrosion resistance

• Low profile head allows near flush fit to application

- Large flange head provides a load bearing surface and reinforces the hole to prevent push-out. Can be used as a spacer and can be supplied with an underhead seal.
- Closed end prevents the ingress of dirt and fluids into thread and electrical circuits
- Can be used with hand tools, pneumatic tools and fully automated machines to suit a wide range of assembly methods

Specifications Typical placing sequence



- Automotive chassis components
- Electrical engineering
- Sheet metal
- Domestic appliances
- Switchgear cabinets
- Thermal applications



High Strength Hexsert[®]

High strength Hexsert[®] provides clamp force comparable to weld nuts and clinch nuts in high torque applications. They offer equivalent thread proof load strength to ISO 898 Property Class 10 weld nuts and clinch nuts, and can handle tightening torques commonly applied to Property Class 10.9 and 12.9 screws and bolts.

Key features and benefits

- Exceptional torque capability
- High speed assembly
- Provides high-strength threads in thin materials starting at 0.5mm
- Increased thread strength

- If excessive torque is applied, the screw shank should fail before the insert, avoiding over-tightening problems such as thread stripping and expensive rework
- Installed with standard Avdel handtools, as well as multihead and auto-feed robotic systems

Specifications

Typical placing sequence

Thread Sizes:

M5 – M12 Material: Steel Headforms: Large flange Body:

Hexagonal

Hole Size:

Metric



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

- Tubular steel
- Hydroformed parts
- Magnesium castings
- Aluminum extrusions







Squaresert[®]

Steel inserts with square body, providing very high torqueto-turn and pull-out performance in all materials.

Key features and benefits

- Square section and bore improves torque-to-turn in components via form lock due to even greater contact surface compared to round and splined inserts
- Increases hole punch life compared to hexagonal geometries
- Superior pull-out performance
- Can be used for very thin sheet materials from 0.50mm (0.02")



- Various platings available to increase corrosion resistance
- Large flange head provides a load bearing surface and reinforces the hole to prevent push-out
- Can be used as a spacer and can be supplied with an underhead seal
- Can be used with hand tools, pneumatic tools and fully automated machines to suit a wide range of assembly methods

Specifications Typical placing sequence

Thread Sizes: M5 – M8 Material: Steel Headform: Large flange Hole Size: Metric



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

- Automotive body mountings
- Electrical enclosures
- Soft sheet metal
- Plastics & composites
- Domestic appliances
- General light fabrication



Versa-Nut[®]

Versa-Nut[®] inserts are designed for blind-sided use in soft materials, plastics and composites. Versa-Nut[®] Inserts have a higher pull out and torque-to-turn resistance than most alternative blind inserts. The insert's higher strength allows designers to reduce the size or number of fasteners in an assembly and because it features a grip range far greater than that of a standard rivet nut, it suits a wide number of applications.



Key features and benefits

- Specially designed for use in soft or weak materials, plastics, composites, or very thin panels
- Large head size spreads clamp load of assembled joint
- Additional benefits against conventional inserts:

1) Extra large blind side bearing area after placing offers:

- Higher pull-out and torque-to-turn resistance
- Less radial loading of holes in brittle materials
- Less risk of cracking and de-lamination of composites

2) Up to twice the grip range of standard blind inserts:

- Enables a designer to reduce the size or number of fasteners in an assembly
- Covers large variations of thicknesses

Specifications

Typical placing sequence

Thread Sizes: M4 – M8 Material: Steel Headform: Large flange Body: Round Hole Size: Imperial



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

- Blow-molded automotive parts and trim fixings
- Sandwiched sections, and composite panels in truck, bus, caravan and marine interiors
- General composite and plastic sections for toys
- Small domestic appliances
- Containers
- Display panels
- Plastic furniture
- Fiberboard and plywood assemblies







Installation Tools

Avdel offers a highly cost effective and flexible range of hand operated power tools for placing threaded inserts. The range is designed to meet the needs of different applications and assembly environments as well as different types of threaded inserts. Key benefits include:

- Lower in-place costs through high speed, accurate placement of inserts
- Greater production flexibility from batch work to assembly line
- Improved product quality through reliable and secure thread installation
- Maximum operator comfort and improved ergonomics

Handtools

Avdel Threaded Insert Power Tools offer two types of technology:

The benefits of 'spin-pull' technology

- Generates high pull forces required to place large diameter and thick wall inserts
- Reduces wear on the drive screw resulting in lower maintenance and longer tool lifetime
- Compact, ergonomically designed tools which can be suspended or hand held
- Allows placement of lubricated and unlubricated inserts



1. The insert is automatically threaded onto the drive screw.

2. On activating the tool, the threaded insert is pulled towards the tool, forming the body radially outwards to clench tightly against the workpiece.

3. The drive screw of the tool reverses and is disengaged from the thread leaving the insert securely in position.

The benefits of 'spin-spin' technology

- Cost-effective for placing smaller thread sizes M3-M5
- Can place inserts in a range of sheet thicknesses, without the need for tool adjustment
- Lightweight design, ideal for on-line suspended applications
- Places lubricated inserts only



1. The insert is automatically threaded onto the drive screw.

2. On activating the tool, the drive screw rotates with the threaded insert. This action pulls up the insert forming the body radially outwards to clench it tightly against the workpiece.

3. At a predetermined torque, the drive screw of the tool reverses and is disengaged from the thread leaving the insert securely in position.

Handtools

74200 'spin-pull' tool

A high performance hydro-pneumatic power tool in heavy duty plastic, designed for rapid, blind sided installation of threaded inserts from M3 to M12.

- Heavy duty plastic tool body and long-life components provide a durable and robust construction for a long working life. Ideal for demanding production environments
- The ergonomic design provides for reduced operator fatigue and increased productivity. The tool can be suspended or hand held
- Latest 'spin-pull' technology ensures accurate and secure thread installation and reduces wear on the drive screw.
- Places lubricated and unlubricated inserts
- Lightweight design makes it portable and easy to handle
- Average cycle time of 2.5 secs reduces assembly time to a minimum

74201 'spin-pull' tool

The 74201 tool complements the 74200 model by offering the additional feature of pressure setting so that the insert is always fully formed, regardless of clamping capacity changes. It is designed for applications where inserts are being placed into the same application with varying sheet thicknesses, which is increasingly the case with the use of plastics, composite materials and magnesium and aluminium castings. The 74201 is also advantageous in conditions where swarf may be present at the back of drilled holes and for blind holes (i.e. tubes) where you cannot see if the insert has correctly formed – body building, instrument panel beams.

The tool installs inserts to a set hydraulic pressure (which may be adjusted), rather than operating to a fixed stroke. This eliminates the need to adjust stroke or to use more than one tool to install inserts into different thicknesses, improving product quality and reducing assembly cycle times.

- The pressure setting allows operators to install same fastener into varying material thickness without any adjustment to stroke. Thus eliminates operator responsibility for setting tool stroke and also overcomes rear sheet swarf issues
- Utilises standard 74200 nose equipment and can install M3 to M8 inserts
- The ergonomic design provides for reduced operator fatigue and increased productivity. The tool can be suspended or hand held
- The plastic covered cast and aluminium body provides highly impact resistance when dropped. The tool does not rely on plastic casing to take loading from pneumatic cylinder action
- Steel tie rods for increased structural integrity
- Lightweight design makes it portable and easy to handle
- Heavy duty rubber base increases impact resistance and durability





74201



74405 'spin-pull' split tool

A high performance hydro-pneumatic power tool designed for installing large diameter threaded inserts and/or inserts requiring more setting stroke. This tool offers a greater amount of power and stroke, whilst maintaining lightweight and ergonomic features as a result of the split intensifier.

- Split tool offering a lightweight placing head
- Designed to place Versa-Nut® threaded inserts up to M10
- The ergonomic design provides for reduced operator fatigue
- High placement speed for increased productivity
- Robust tool with ease to maintenance

74101 & 74110 'spin-spin' tools

These cost-effective pneumatic tools place a range of M3 to M10 inserts and are ideal for batchwork or flowline. They are quick and simple to operate with average cycle times of just three seconds. For maximum production flexibility and operator comfort both tools can be suspended or hand held and offer a choice of pistol grip or in-line (straight) grip.

74290 tool for hexagonal hole production

The 74290 tool compliments and extends the range of Avdel hand tools for installing threaded inserts, by offering the capability of producing hexagonal holes for threaded Hexsert[®] inserts into materials where access is only possible from one side. The 74290 tool allows customers to benefit from the non-rotational properties of hexagonal inserts compared with round inserts. This is achieved by drilling a round hole, then inserting the 74290 tool and forming a hex hole.



Automated Assembly Systems

Autosert®

The Autosert[®] automated system is a modular design for M3-M10 threaded inserts, reducing assembly time and costs. The integral processing diagnostics ensure the assembly process is highly controlled for improved product quality. The feeder bowl holds up to 2000 inserts for continuous fastener feed.

- Modular design of placing head, blow feed unit and PLC control cabinet for quick and simple integration into assembly lines. The system works as a stand-alone unit and can be used to fasten a wide range of applications.
- Flexible electric, pneumatic and hydraulic connections between the three main components for quick and simple interface with a wide range of assembly systems.
- For maximum production flexibility and minimum tool downtime the compact, lightweight placing head is quick to reconfigure, can be mounted separately and used at any angle.
- The integral processing diagnostics at all stages with clear and simple PLC displays provide for high precision, highly reliable assembly and improved product quality.



Assembly Applications

Automotive - Car Seat

Four Autosert[®] workstations with blow feed system, modular head, stockline indicator and bulk container, place 4 x M12 Hexsert[®] inserts per unit in a cycle time of 30 seconds. A total of 7,200 Hexsert[®] inserts are placed in 1800 units per day.



Automotive - Dashboard

The assembly of this dashboard mounting beam, a hydroformed tube with 29 lasered hex holes, is fully automated with robots. Four Autosert[®] workstations with blow feed systems and modular heads place 29 x M6 and M8 Hexsert[®] inserts per part in a cycle time of 95 seconds.





Assembly Workstations

Customised Assembly Systems

Multi-head Workstation (semi automated)

Designed for multiple and synchronous placement of threaded inserts. The example shows a station for placing 6 x M5 Hexsert[®] inserts for different applications, including process monitoring of part and insert presence and insert placed diagnostic. These customised multi-head workstations can dramatically reduce assembly time and cost at improved quality.







The Range of Avdel[®] Blind Fastening Systems



Speed Fastening® Systems

Extra fast and reliable fastening from one side. Because rivets are fed automatically.



Breakstem Systems

Blind fastening systems with various features. From multi-grip rivet up to high strength stainless steel rivet.



Lockbolt Systems

For joints with highest impact. High clamp force and vibration resistance.



Blind Threaded Inserts

Fast system for sustainable threads with high torque-to-turn.



Installation Equipment

From manually operated handtools to customised assembly workstations.

Avdel[®] Blind Threaded Inserts

AUSTRALIA

Acument Australia Pty Ltd. 891 Wellington Road Rowville Victoria 3178 Tel: +61 3 9765 6400 Fax: +61 3 9765 6445 E-mail:info@acument.com.au

CANADA

Avdel Canada, a Division of Acument Canada Limited 87 Disco Road Rexdale Ontario M9W 1M3 Tel: +1 416 679 0622 Fax: +1 416 679 0678 E-mail:infoAvdel-Canada@ acument.com

CHINA

Acument China Ltd.

RM 1708, 17/F., Nanyang Plaza, 57 Hung To Rd., Kwun Tong Hong Kong Tel: +852 2950 0631 Fax: +852 2950 0022 E-mail: infochina@acument.com

FRANCE

 Avdel France S.A.S.

 33 bis, rue des Ardennes

 BP4

 75921 Paris Cedex 19

 Tel:
 +33 (0) 1 4040 8000

 Fax:
 +33 (0) 1 4208 2450

 E-mail: AvdelFrance@acument.

GERMAN

Avdel Deutschland GmbH

Klusriede 24 80851 Langenhagen Fel: +49 (0) 511 7288 0 Fax: +49 (0) 511 7288 133 E-mail: AvdelDeutschland@ acument.com

ITALY

vdel Italia S.r.l.

Viale Lombardia 51/53 20047 Brugherio (MI) Tel: +39 039 289911 Fax: +39 039 2873079 E-mail: vendite@acument.coi

JAPAN

Acument Japan Kabushiki Kaisha

Center Minami SKY, 3-1 Chigasaki-Chuo, Tsuzuki-ku, Yokohama-city, Kanagawa Prefecture Japan 224-0032 Tel: +81 45 947 1200 Fax: +81 45 947 1205 F-mail: info@acument.co.in

SINGAPORE

Acument Asia Pacific (Pte) Ltd.

#05-03/06 Techlink 31 Kaki Bukit Road 3 Singapore, 417818 Tel: +65 6840 7431 Fax: +65 6840 7409 E-mail: Tlim@acument.com

SOUTH KOREA

212-4, Suyang-Ri, Silchon-Eup, Kwangju-City, Kyunggi-Do, Korea, 464-874 Tel: +82 31 798 6340 Fax: +82 31 798 6342

SPAIN

Avdel Spain S./

C/ Puerto de la Morcuera, 14 Poligono Industrial Prado Overa Ctra. de Toledo, km 7,8 28919 Leganés (Madrid) Tel: +34 (0) 91 3416767 Fax: +34 (0) 91 3416740 E-mail: ventas@acument.com

UNITED KINGDOM Avdel UK Limited

Pacific House 2 Swiftfields Watchmead Industrial Estate Welwyn Garden City Hertfordshire AL7 1LY Tel: +44 (0) 1707 292000 Fax: +44 (0) 1707 292199

USA

Avdel USA LLC 614 NC Highway 200

 Stanfield, North Carolina 28163

 Tel:
 +1 704 888-7100

 Fax:
 +1 704 888-0258

 E-mail- infoAvdel-LISA@acument.com

www.avdel-global.com

Your local distributor for Avdel® Blind Threaded Inserts is:

Avdel[®], Eurosert[®], Hexsert[®], Nutsert[®], Squaresert[®], TSN[®], Nutsert SQ[®] and Holding your world together[™] are registered trademarks of Avdel UK Limited. Autosert[®], Speed Fastening[®] and Versa-Nut[®] are registered trademarks of Acument Intellectual Properties, LLC. Rimlex[®] is a registered trademark of Inlex Locking Limited Corporation.

Data shown is subject to change without prior notice as a result of continuous product development and improvement policy Your local Avdel representative is at your disposal should you need to confirm latest information.

