

To remain competitive in today's rapidly changing technological environment, it is essential that production methods are fast, versatile and cost effective.

Assembly problems are often intricate, with design, size and specifications varying significantly to meet market preferences and customer needs.

Manufacturers work with a variety of sheet sizes and thicknesses, and with square or tubular components, many requiring access from one side during assembly. Requirements vary from batch assembly to flow line production. From domestic appliances, requiring adjustable feet and reversible doors, to the exacting standards of high technology applications, where small components are used in electronic and computer assembly. These and many other applications are ideal for one or more threaded inserts.

**Placing Sequence Standard Threaded Inserts**  
 exclusive "One Piece" design consists of an upper sleeve and a conically shaped, internally threaded base that features a unique "Breakaway" section.

**How it works**

- 1 Threaded insert is placed into the prepared hole.
- 2 On actuation, the tool breaks the conical-shaped portion and draws it up into the sleeve.
- 3 The tool is withdrawn leaving the threaded portion fully expanded into the hole ready to receive a screw or bolt.

**Placing Sequence Thin Sheet Threaded Inserts**  
 The Thin Sheet Threaded insert - A "One Piece" which has been developed specifically to give designers a strong, deep, vibration proof steel thread in thin sheet applications down to thickness of 0.020".

**How it works**

- 1 The Thin Sheet Threaded insert is placed into the prepared hole.
- 2 On actuation, the placing tool pulls the threaded portion until the wall collapses radially outwards clenching it tight against the sheet.
- 3 The tool is withdrawn leaving the Thin Sheet Threaded insert ready to receive a screw or bolt.

**Threaded inserts for all applications**

Sheet materials, square or circular tubing or just blind holes. Whatever the requirement, there is a choice of inserts, in various thread sizes and forms. When placed they are extremely resistant to push-out and pull-out pressures. A major feature of the whole range is their ability to be placed in painted materials without damage to the work surface, avoiding re-work and wastage.

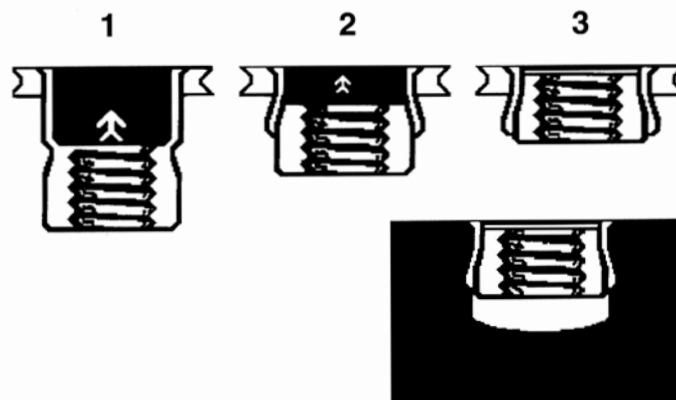
**Ease of Operation**

Any operator may place the range of inserts. No special knowledge or training is necessary. Requiring only pre-drilled, or pre-punched holes, each insert is placed from one side of the work-piece quickly and easily with the appropriate tool.

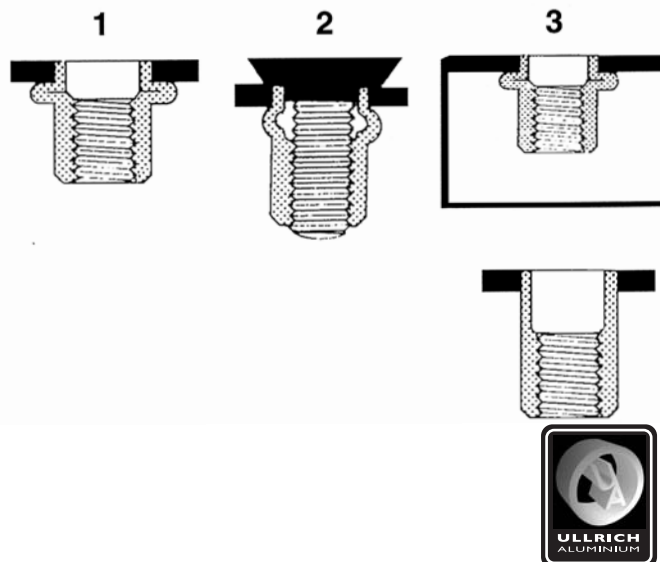
**Simple Construction**

Threaded inserts are high quality components made from carbon steel. Every insert has a prepared deep, vibration proof load bearing thread. When placed, the thread is immediately clear and ready to accept a screw or bolt.

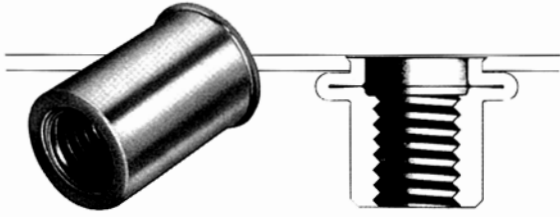
STANDARD THREADED INSERT



THINSHEET THREADED INSERT



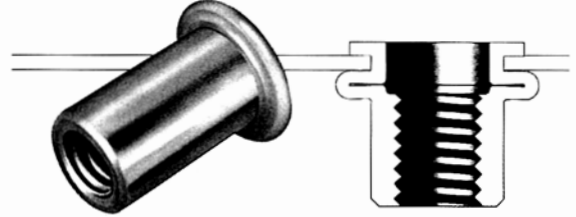
## THIN SHEET THREADED INSERT



Designed for thin sheet applications, each insert size has a wide grip range.

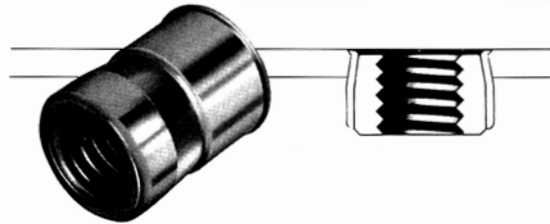
Each insert is zinc plated with a passivated finish. When placed, the insert deforms behind the sheet to provide good bearing area and grip. These inserts provide hardened steel load bearing threads which are zinc plated, passivated and lubricated to ensure consistent placing and good corrosion resistance.

## LARGE FLANGE THIN SHEET THREADED INSERT



Ideal for applications where a larger head is required to spread the load. Each insert has a wide grip range and provides exceptional resistance to push-out and pull-out forces.

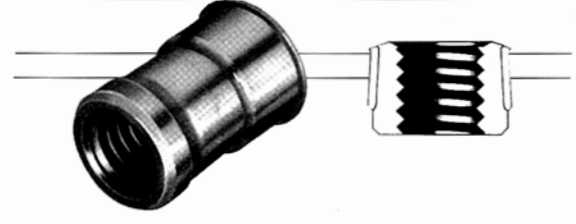
## THREADED INSERT



For use in materials from 0.031" (0.8mm), up to and including blind holes.

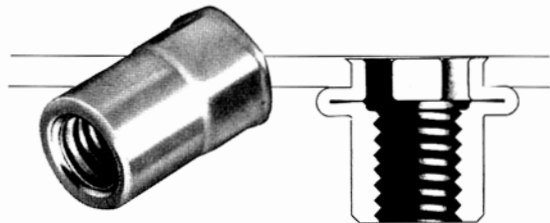
Made from carbon steel and zinc plated, this insert expands in or behind the sheet providing a friction lock between the outer sleeve and inner threaded portion.

## THREADED INSERT



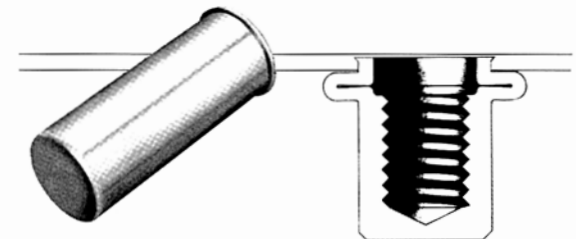
For use in materials from 0.031" (0.8mm) and including blind hole. The insert expands in or behind the sheet. The threaded section of the nut is locked onto the top of the insert shell to provide greater resistance to push out.

## HEXAGONAL THREADED INSERT



The Hexagonal shape is designed to provide increased torque to turn resistance, particularly in cases where bolts or screws may be corroded in service and then prove difficult to remove. The insert forms behind the sheet to provide a secure grip over a large bearing area.

## CLOSED END INSERTS



Where application may be exposed to ingress of moisture and corrosion, or when it is necessary to avoid contact with mechanical components or electrical wiring.


## FEATURES AND BENEFITS

## FEATURES

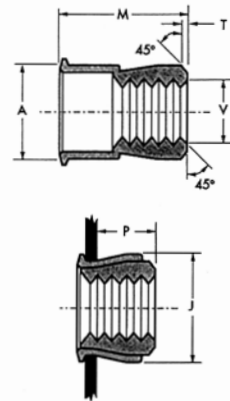
- ★ Wide range of inserts
- ★ High speed placing
- ★ Ideal for painted surfaces
- ★ Clear thread on placing
- ★ Hard Steel load-bearing thread
- ★ One-sided application
- ★ Closed end versions
- ★ Choice of tooling

## BENEFITS

- Extends choice of working materials, provides single source of supply for efficient stocking.
- Increased output and low assembly costs.
- Avoids expensive re-work and wastage.
- Eliminates need for inspection.
- Allows design flexibility.
- Increases speed of assembly.
- Prevents ingress of moisture and corrosion.
- Provides flexibility and scope on production line.

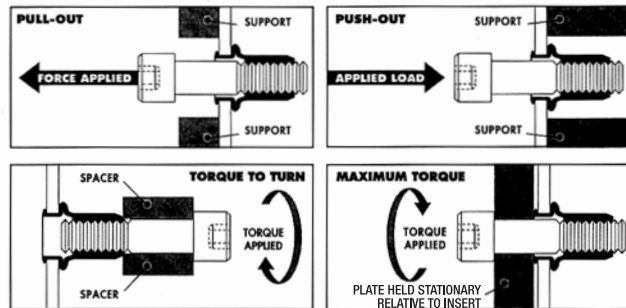
MATERIAL	FINISH	STANDARD THREADED INSERT
Low Carbon Steel to B.S. 970-230 M07	Zinc Plated to B.S 3382	9500 Series 

Thread type & size	Part No	METRIC DATA						
		Hole Size* min./max.	A max.	J max.	M max.	P max.	T min./max.	V min./max.
3/16 BSW	09501-00612	7.15/7.23	7.130	8.89	9.78	5.08	0.64/0.25	5.00/5.92
1/4 BSW	09501-00816	9.53/9.61	9.513	11.18	13.34	6.86	0.64/0.25	5.99/7.06
5/16 BSW	09501-01020	12.70/12.80	12.688	14.48	15.88	8.13	1.02/0.51	8.00/9.09
3/8 BSW	09501-01224	14.29/14.39	14.275	16.26	18.93	9.66	1.02/0.51	10.01/11.10
M4 x 0.7	09508-00412	6.35/6.44	6.338	7.88	9.78	5.08	0.64/0.25	4.01/5.92
M5 x 0.8	09508-00512	7.15/7.23	7.130	8.89	9.78	5.08	0.64/0.25	5.00/5.92
M6 x 1.0	09508-00616	9.53/9.61	9.513	11.18	13.34	6.86	0.64/0.25	5.99/7.06
M8 x 1.25	09508-00820	12.70/12.80	12.688	14.48	15.88	8.13	1.02/0.51	8.00/9.09
M10 x 1.5	09508-01024	14.29/14.39	14.275	16.26	18.93	9.66	1.02/0.51	10.01/11.10




\* ONLY for sheet thickness 1/32" - 1/8" (0.80mm - 3.17mm). Above 1/8" (3.17mm) hole size depends on sheet hardness.

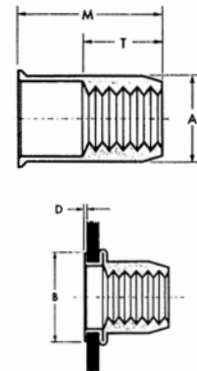
Thread Type & Size	METRIC DATA			
	Pull Out N	Push Out N	Torque to turn Nm	Maximum Torque to be applied to bolt Nm*
3/16 BSW	5916	222	0.56	7.9
1/4 BSW	8618	222	1.1	12.4
5/16 BSW	14790	267	1.7	16.4
3/8 BSW	18904	267	2.26	33.9
M4 x 0.7	4568	133	0.34	5.1
M5 x 0.8	5916	222	0.56	7.9
M6 x 1.0	8618	222	1.1	12.4
M8 x 1.25	14790	267	1.7	16.4



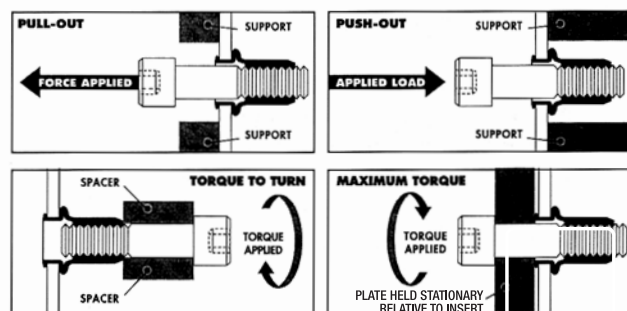
The diagrams above illustrate the nature of the tests conducted to obtain typical strength figures.

MATERIAL	FINISH	STANDARD THREADED INSERT
Low Carbon Steel to B.S. 970-040 A04	Zinc Plated to B.S. 3382 and to B.S 3382	9650 Series 


Thread Size	Part No	METRIC DATA						
		Grip Range min./max.	Hole Size min./max.	A max.	B max.	D max.	M max.	T max.
3/16 BSW	09651-00614	0.51/3.00	7.14/7.23	7.11	8.00	0.50	11.81	6.10
1/4 BSW	09651-00819	0.76/3.25	9.53/9.61	9.50	10.67	0.76	14.60	8.51
M4 x 0.7	09658-00413	0.51/2.00	6.35/6.44	6.32	6.86	0.51	10.41	6.48
M5 x 0.8	09658-00413	0.51/3.00	7.14/7.23	7.11	8.00	0.51	11.81	6.23
M6 x 1.0	09658-00619	0.76/3.25	9.53/9.61	9.50	10.67	0.76	14.60	8.64
M8 x 1.25	09658-05821	0.91/3.70	10.60/10.68	10.57	11.68	0.76	16.00	9.53

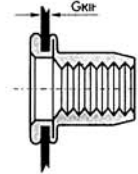
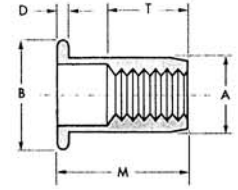


Thread Type & Size	METRIC DATA			
	Pull Out N	Push Out N	Torque to turn Nm	Maximum Torque to be applied to bolt Nm*
3/16 BSW	5693	1979	2.60	7.9
1/4 BSW	6761	2491	3.39	12.4
M4 x 0.7	4092	1379	1.92	5.1
M5 x 0.8	5693	1979	2.60	7.9
M6 x 1.0	6761	2491	3.39	12.4
M8 x 1.25	14679	2811	3.50	16.4



The diagrams above illustrate the nature of the tests conducted to obtain typical strength figures.

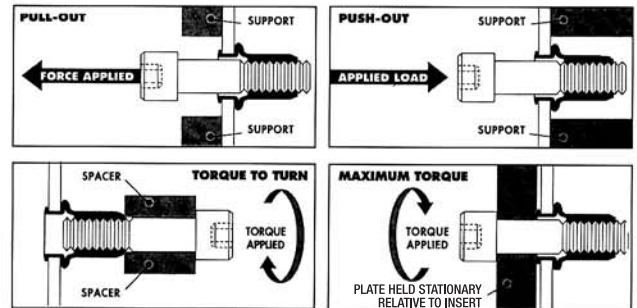
MATERIAL	FINISH	LARGE FLANGE THIN SHEET THREADED INSERT
Low Carbon Steel to B.S. 970-040 A04	Zinc Plated to B.S. 3382 and gold passivated to B.S. 6338	9698 Series 




METRIC DATA									
Thread Type & Size	Part N <sup>o</sup>	Grip Range min./max.	Hole Size min./max.	A	B	D	J	M	
				max.	min./max.	0.13	nom.	nom.	
M4 x 0.7	09698-00415	0.5/2.5	6.1	6.05	8.90/9.30	0.80	11.7	6.2	
M5 x 0.8	09698-00516	0.5/2.5	7.1	7.05	9.70/10.30	1.00	12.1	6.0	
M6 x 1.0	09698-00620	0.5/3.0	9.1	9.05	12.90/13.30	1.50	15.9	8.4	
M8 x 1.25	09698-00823	1.0/4.0	11.1	11.05	13.7/14.3	1.50	17.5	10.0	
	09698-02822	0.5/3.0	11.1	11.05	15.60/16.40	1.50	17.5	10.0	
	09698-02825	3.0/5.5	11.1	11.05	15.60/16.40	1.50	20.0	10.0	

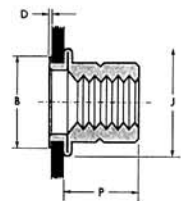
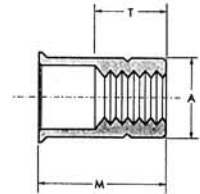
PERFORMANCE DATA

Thread Type & Size	METRIC DATA			
	Pull Out N	Push Out N	Torque to turn Nm	Maximum Torque to be applied to bolt Nm*
M4 x 0.7	7117	1926	1.9	5.1
M5 x 0.8	9029	3482	2.6	7.9
M6 x 1.0	13277	5084	3.4	12.4
M8 x 1.25	18192	7792	3.6	16.4
M10 x 1.5	15790	9200	3.8	33.9



The diagrams above illustrate the nature of the tests conducted to obtain typical strength figures.

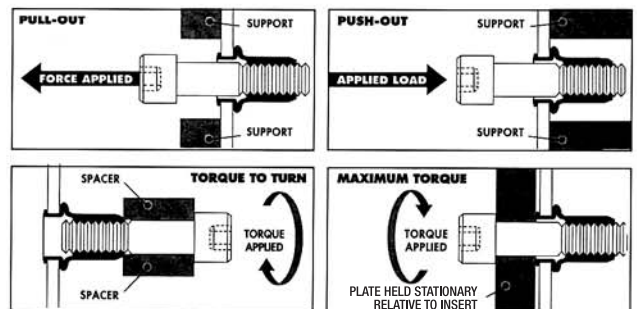
MATERIAL	FINISH	THIN SHEET THREADED INSERT
Stainless Steel A1S1 303	Natural	9468 Series 



METRIC DATA										
Thread Type & Size	Part N <sup>o</sup>	Grip Range min./max.	Hole Size min./max.	A	B	D	J	M	P	T
				max.	max.	max.	max.	max.	max.	max.
M4 x 0.7	09468-00413	0.51/1.27	6.35/6.44	6.317	7.50	0.64	10.3	10.42	7.2	6.61
M5 x 0.8	09468-00514	0.60/1.27	7.14/7.23	7.110	8.26	0.64	12.7	11.82	7.0	6.35
M6 x 1.0	09468-00619	0.76/3.25	9.53/9.61	9.492	10.85	0.77	15.5	14.61	9.5	8.77
M8 x 1.25	09468-05821	0.91/3.25	10.59/10.86	10.567	11.74	0.77	17.2	16.13	10.1	9.40

PERFORMANCE DATA

Thread Type & Size	METRIC DATA			
	Pull Out N	Push Out N	Torque to turn Nm	Maximum Torque to be applied to bolt Nm*
M3 x 0.5	8250	1084	0.40	4.00
M4 x 0.7	11456	2068	1.90	5.60
M5 x 0.8	15940	2770	2.60	11.30
M6 x 1.0	18311	2990	3.40	16.90
M8 x 1.25	24220	3280	3.60	22.60
M10 x 1.5	33908	4264	4.20	33.90



The diagrams above illustrate the nature of the tests conducted to obtain typical strength figures.

