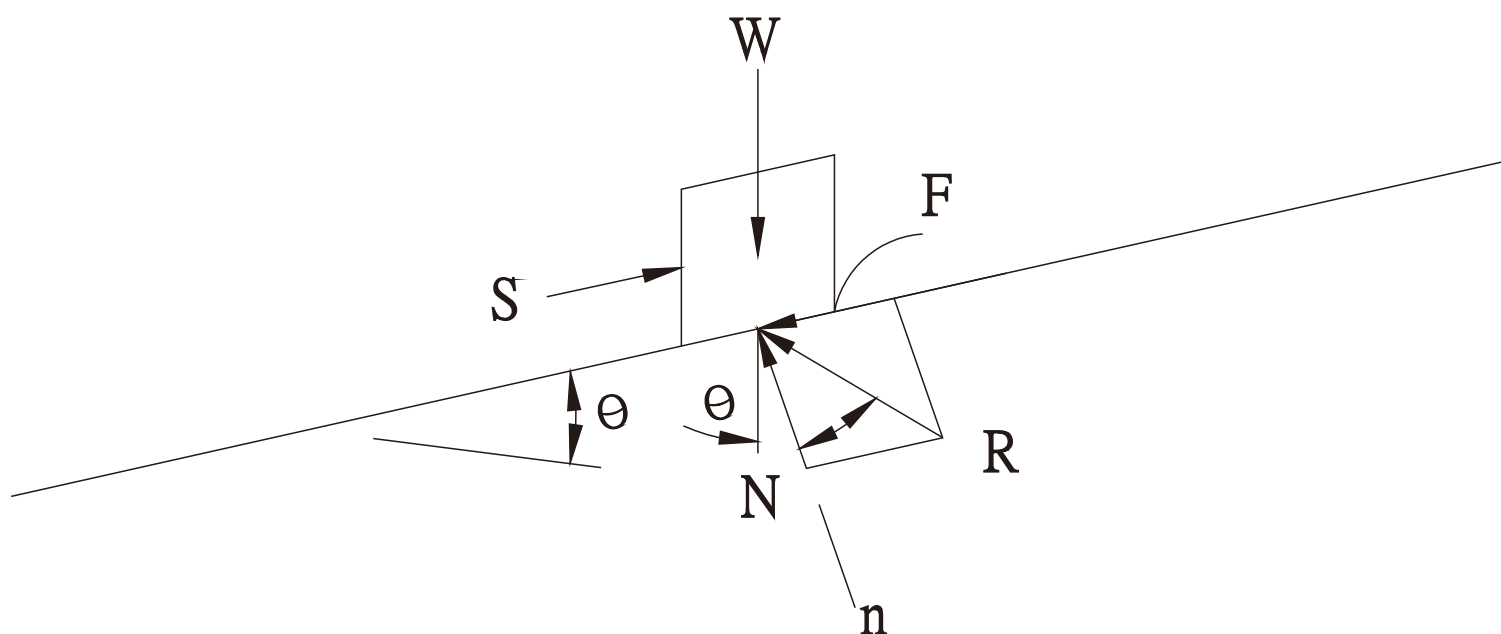


Genius....
Fastener.....
Solutions.....

Pursuit of brilliance
Creation of brighter future
追求卓越，共創未來



G . F . S .

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金英時科技有限公司

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10F, No 380, TaDung Rd., Sijhih City, Taipei 221, Taiwan

ABOUT US

G.F.S. was established in the year of 2008. Our company had more than 10 years of experience in product design and production in the past.

G.F.S. is now focusing on provide fasteners solutions and manufacturers with engineered solutions to assembly problems.

G.F.S 成立於2008年.在此之前已經有超過十年的產品設計及生產的經驗。而今，金英時科技有限公司 (G.F.S.)著重於扣件開發方案及扣件組裝問題的解決。

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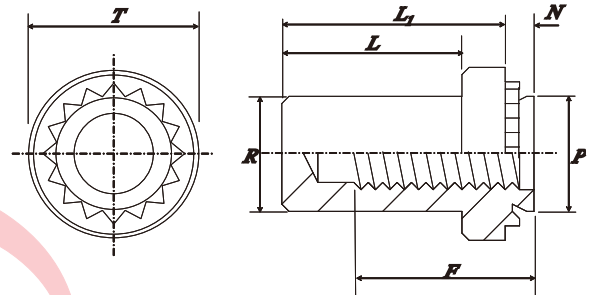
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SELF-CLINCHING FASTENERS

TYPES GB & GBS

These fasteners have been designed to provide permanent blind threads in thin sheet (from 1mm). Blind end prevents contamination from foreign bodies. Self-locating, they are easily installed into punched or drilled holes using any standard squeeze press. Ensure surfaces remain parallel for optimum installation. Available in steel or stainless steel. Optional finish – zinc plating on steel.



Product Code	Thread Size		Shank No.	Minimum Sheet Thickness	N max	Shank Dia. P max	Cylinder dia. R max	Hole Size + 0.08 - 0.00	Minimum F Max (full threads)	L1 max	L2 $\times 0.25$	T $\times 0.4$	Min. Distance hole C/L to sheet edge
GB	M3	4.40	1	1.0	0.97	4.22	3.80	4.25	5.3	8.5	9.6	6.35	4.8
			2	1.4	1.37								
	–	6.32	1	1.0	0.97	4.75	4.29	4.76	5.8	8.5	9.6	7.10	5.5
			2	1.4	1.37								
GBS	M4	8.32	1	1.0	0.97	5.38	5.20	5.4	7.1	9.8	11.2	7.95	6.9
			2	1.4	1.37								
	M5	10.24	1	1.0	0.97	6.38	6.00	6.4	6.8	9.8	11.2	8.75	7.1
			2	1.4	1.37								
	M6	1/4	1	1.4	1.37	8.72	7.80	8.6	7.8	12.7	14.3	11.0	8.6
			2	2.3	2.21								

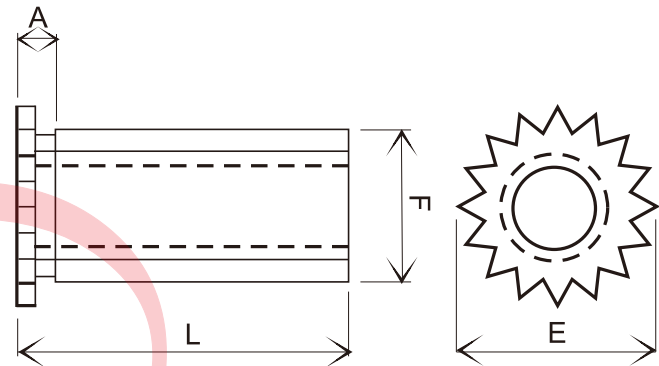
MATERIAL:	FINISH:
GB – Heat treated Carbon Steel	Steel – Zinc Plating
GBS – 300 series Stainless Steel	Stainless Steel – Passivated and/or tested to ASTM A380

PART NUMBER DESIGNATION		
	UNIFIED	METRICS
Type	GB	GB
Thread Size	4-40	M2
Shank Code	1	1
Finish (if applicable)	Zinc	Zinc

SELF-CLINCHING FASTENERS

TYPES SFK

PART NUMBER DESIGNATION	
	METRICS
Type	SFK
Thread Code	M3
Material	S
Length Code	4



Product Code	Thread Size	Shank No.	Minimum Sheet Thickness	A max	Shank Dia. E ± 0.1	Cylinder dia. F max	Hole Size +0.08	Length "L" 0.05					Min. Distance hole C/L to sheet edge
SFK	M1.6	1	0.6	0.53	4.07	3.60	3.60	2.5	3.0	3.5	5.0		3.58
		2	0.8	0.73									
		3	1.0	0.97									
	M2.0	1	0.6	0.53	4.07	3.60	3.60	2.5	3.0	4.0	5.0	8.0	3.58
		2	0.8	0.73									
		3	1.0	0.97									
	M2.5	1	0.6	0.53	4.07	3.60	3.60	2.5	3.0	4.0	5.0	8.0	3.58
		2	0.8	0.73									
		3	1.0	0.97									

MATERIAL	FINISH:
•“SS” 300 series stains steel	N/A
•“S” Carbon Steel	Nickel Plating

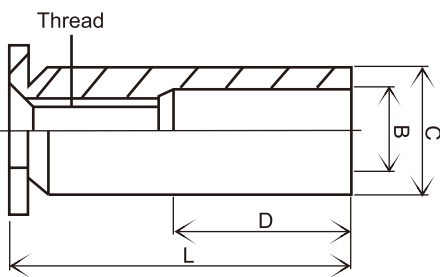
Part Number Designation

SFK	-	S	-	M2	-	2	-	Ni
Type		Material		Thread or Thru Hole Code		Length		Finish

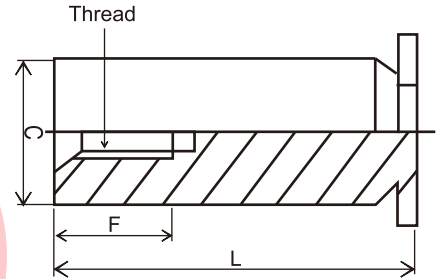
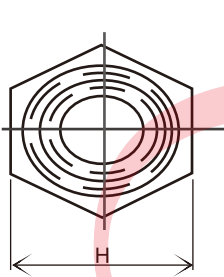
SELF-CLINCHING FASTENERS

TYPES GSO & GBSO

GSO and GBSO are designed to serve as spacers or distance pieces. They greatly simplify assembly and speed the production of fabricated spaced panels and components.



TYPES GSO



TYPE GBSO

Product Code	Thread Size		Minimum Sheet Thickness	Hole Size +0.08 0.00	C Dimension +0 0.012	H Hex Dimension	B Counter bore Diameter	Min. Distance hole C/L to sheet edge
GSO GBSO	M2.5/*M3	4.40	>1.0	4.22	4.2	4.8	3.22	6.0
	M3	6.32	>1.0	5.4	5.38	6.35	3.22	6.7
	M4	8.32	>1.3	7.15	7.13	7.9	4.8	8.0
	M5	10.24	>1.3	7.15	7.13	7.9	5.3	8.0

Type	Thread Size	Length Code (mm)									
GSO	M2/*M3	3	4	5	6	8					
	M3		4	5	6	8	12	14	16	18	
	M4					6	8	12	14	16	18
	M5										

GBSO	M2/*M3		4	5	6	8					Thread depth
	M3				6	8	12	14	16	18	
	M4					8	10	12	14	16	Maximum possible
	M5					8	10	12	14	16	

PART NUMBER DESIGNATION

GSO - S - M2 - 3 - Z

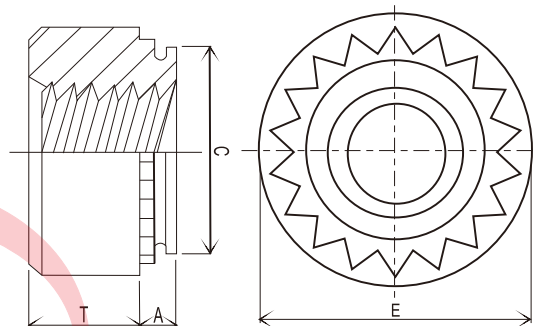
Type Material Thread Length Finish

Material	FINISH
"S" Carbon Steel	Zinc Plated
"SS" 300 series Stainless Steel	

SELF-CLINCHING STANDOFFS

TYPES GS & GSS

These fasteners accurately space a metal panel or Printed Circuit board by soldering the panel or board onto the stand off in steel or stainless steel. Optional finish – zinc plating on steel.



ISO METRIC (公制) & UNIFIED (英制)

Product Code	Thread Size		Shank No.	Minimum Sheet Thickness	A max	Shank Dia. P max	Hole Size +0.08 -0.00	Minimum F Max (full threads)	L ₁ max	T ±0.4	Min. Distance hole C/L to sheet edge
GS GSS	M3	4.40	1	1.0	0.97	4.22	4.25	5.3	8.5	6.35	4.8
			2	1.4	1.37						
	-	6.32	1	1.0	0.97	4.75	4.76	5.8	8.5	7.10	5.5
			2	1.4	1.37						
	M4	8.32	1	1.0	0.97	5.38	5.4	7.1	9.8	7.95	6.9
			2	1.4	1.37						
	M5	10.24	1	1.0	0.97	6.38	6.4	6.8	9.8	8.75	7.1
			2	1.4	1.37						
	M6	1/4	1	1.4	1.37	8.72	8.6	7.8	12.7	11.0	8.6
			2	2.3	2.21						

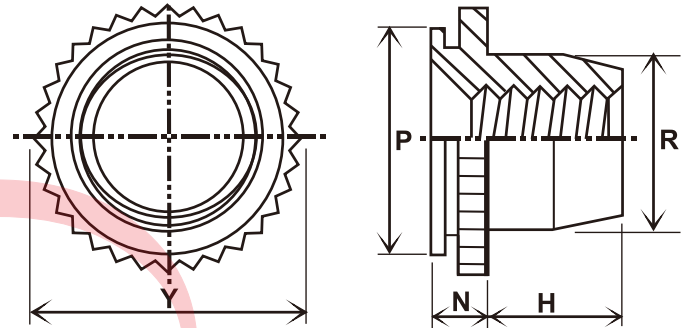
MATERIAL:	FINISH:
GSS - 300 series Stainless Steel	Passivated and/or tested to ASTM A380
GS – Heat treated Carbon Steel	Steel – Zinc Plating

PART NUMBER DESIGNATION	
	METRICS
Type	GS
THREAD SIZE	M3
SHANK CODE	1

MINIATURE SELF CLINCHING FASTENERS

TYPES GX & GOX

These fasteners are designed to provide maximum security within a minimum size envelop. Miniature Self Clinching Fasteners can be supplied either free running or with controlled self-locking threads.



ISO METRIC

TYPE Self Locking	Thread Size	Sheet Thickness	N max	P - 0.13	R max	Y ± 0.13	H + 0.4	Hole Size +0.08 - 0.00	Minimum distance hole C/L to sheet edge
GX	M2	0.8	0.8	3.53	3.05	4.07	1.6	3.6	3.58
GX	M2.5	0.99 – 1.14	1.02	4.34	3.96	4.88	4.4	4.45	4.4
GOX		1.50 – 1.78	1.53						
GX	M3	0.99 – 1.14	1.02	7.34	5.23	8.17	2.55	7.4	5.2
GOX		1.50 – 1.78	1.53						

MATERIAL:	FINISH:
300 series Stainless Steel	Passivated and/or tested to ASTM A380
Carbon Steel	Nickel Plating

PART NUMBER DESIGNATION	
	METRICS
Type	GX
Thread Code	M3

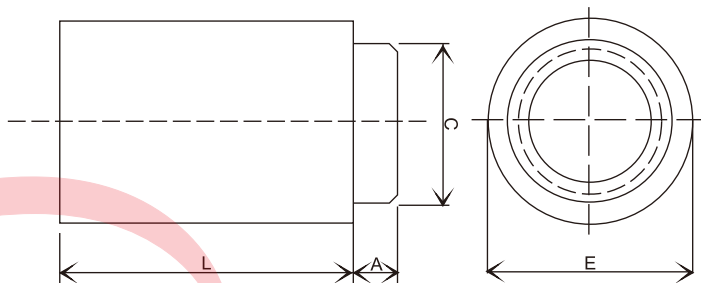
SUS ADDED "SS" : GXSS – SS-M3

SMT NUT STANDOFFS

TYPE SMT GN

(FOR PRINTED CIRCUIT BOARDS)

These fasteners accurately space a metal panel or Printed Circuit board by soldering the panel or board onto the stand off.



ISO METRIC

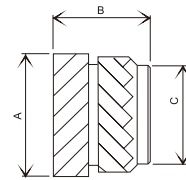
All dimensions are in millimetres.

Type	Thread Size	Length Code "L" +/-0.10 (Unit is in millimeters)						A Max.	C Max.	E +0.1	Min. Sheet Thickness	Hole Size In Sheet +0.08
SMTGN	M2X0.4	2	3	5	6			0.97	3.0	5.0	1.0	3.1
								1.48	3.0	5.0	1.5	3.1
SMTGN	M2.5X0.45	2	3	5	6			0.97	4.1	5.6	1.0	4.2
								1.48	4.1	5.6	1.5	4.2
SMTGN	M3X0.5	2	3	5	6	8		1.48	5.0	7.0	1.5	5.1
SMTGN	M3.5X0.6	3	3	5	6	8	10	1.48	6.2	8.7	1.5	6.3
SMTGN	M4X0.7	4	5	6	7	8	10	1.48	6.2	8.7	1.5	6.3

All dimensions are in millimetres.

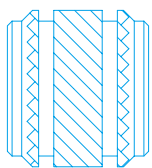
Type	Thru Hole +0.10/ 0.08	Length Code "L" +/- 0.10 (Unit is in millimeters)						A Max.	C Max.	E Max.	Min. Sheet Thickness	Hole Size In Sheet +0.08
SMTGT	3.0	2	3	4	6	8	10	0.97	4.1	5.6	1.0	4.2
	3.5							1.48	4.1	5.6	1.5	4.2
MATERIAL:		FINISH:										
SMT NUT Carbon Steel		Matte TIN										
Technical details may change. Please contact G.F.S. for I specifications.												
Order conditions and minimums may apply to some products.												

G.F.S. 螺母尺
寸規格表
單位 Unit: mm



品名 (Plastic Insert)	螺牙 THREAD	外徑 A	長度 B	塑膠	孔徑	塑膠最小 肉厚 E 僅 供參考因 塑料而異
				直徑 C 此為成型 後下限值	深度 D 視空間可 略為縮短	
PI-B-M1.2X2.0-OD2.1	M1.2	2.10	2.00	1.80 +0 - 0.05	3.0	0.80
PI-B-M1.4X2.0-OD2.3	M1.4	2.30	2.00	2.0 +0 -0.05	3.0	
PI-B-M1.6X1.80-OD2.50	M1.6	2.50	1.80	2.20 + 0 -0.10	2.80	
PI-B-M1.6X2.00-OD2.50			2.00		3.00	
PI-B-M1.6X3.0-OD2.35		2.35		2.05 +0/-0.1	4.0	0.8
PI-B-M2.0X1.60	M2X0.4	3.59	1.60	3.30 + 0 -0.10	2.60	1.30
PI-B-M2.0X2.00			2.00		3.00	
PI-B-M2.0X3.00			3.00		4.00	
PI-B-M2.5X2.00	M2.5X0.45	4.60	2.00	4.10 + 0 -0.10	3.00	1.60
PI-B-M2.5X3.00			3.00		4.00	
PI-B-M2.5X2.00-OD4.20		4.20	2.00	3.70 + 0 -0.10	3.00	
PI-B-M2.5X3.00-OD4.20			3.00		4.00	
PI-B-M2.6X4.00	M2.6X0.45	4.60	4.00	4.10 + 0 -0.10	5.00	1.60
PI-B-M2.6X4.00-OD4.20		4.20	4.00	3.70 + 0 -0.10	5.00	
PI-B-M3.0X5.00	M3X0.5	4.60	5.00	4.10 + 0 -0.10	6.00	1.60
PI-B-M4.0X6.00	M4X0.7	6.31	6.00	5.70 + 0 -0.10	7.00	2.10
PI-B-M5.0X5.80	M5X0.8	7.07	5.80	6.50 + 0 -0.10	6.80	2.60

INSERT FOR PLASTIC

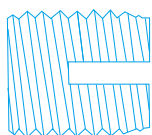
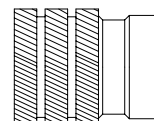


GK-01 Series

For maximum convenience, GK-01 Series has been designed to allow complete interchangeability with GK-01, allowing use of the same hole diameters and lengths.

GK-02

GK-02 has been designed to cope with the difficulties presented by hard brittle thermoset materials. The sharp precision knurl pattern cuts into these materials eliminating radial stresses, and allowing thinner boss walls than many other insert. This gives freedom to design smaller bosses reducing the risk of sink marks.

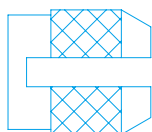
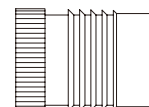


GK-03

GK-03 is a self-tapping insert suitable for installation into a wide range of thermosetting materials. Particularly suitable for the thermosetting polyesters and plastic foams. Screw-ert provides very high pull-out resistance and is suitable for application involving "jack-out" loading.

GK-04 Series

GK-04 is a press-in insert which can be installed easily into most thermoplastic materials. Unlike the GK-05 range these inserts have a free running thread for use where a locking action is considered undesirable.

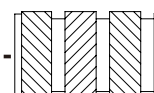


GK-05 Series

GK-05 are expansion type inserts which, due to their diamond knurl pattern, give minimum penetration of the sides of the hole without sacrificing pull-out resistance.

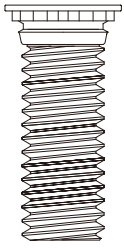
GK-06 Series

GK-06 has its unique design ensures high levels of performance, which also blind ended - prevents ingress of plastic.



SERVICE CONDITIONS	FASTENING SYSTEM			
	GK-01	GK-05	GK-04	GK-03
* Moderate clamping pressure	•	•	•	•
High clamping pressure	•			•
* Moderate direct torque	•	•	•	
High direct torque	•			
Vibration		•		
High jack out loads	•			•
Material with low core strength e.g. Foams				•
Notch sensitive materials				
Track or line fastener installation		•		
High degree of re-usability	•	•	•	•
Double Ended for easy installation	•			
Installation by Hand Tools		•		•
Simple Press		•	•	
Direct Heat	•			
Ultrasonics				
Fully automated Equipment	•	•	•	•
Tapping machine				•
Power Screwdriver				

SHEET METAL FASTENERS



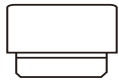
GK-07 Series

Self Clinching captive studs are designed for quick, easy installation using a simple 'squeeze' press.

They can be fitted into steel, brass, copper and aluminum alloy sheet and completely eliminate costly, unreliable and time consuming welding methods.

GK-08 Series

GK-08 are designed to provide a thread within the sheet thickness giving a flush finish to both sides. They are easily and quickly installed and only require a round hole. A simple squeezing action embeds the hexagonal head into the sheet and the displaced metal flows evenly round the displaced metal flows evenly round the back tapered shank securely locking it into place. High pull-out resistance is provided, whilst the hexagonal head provides high torque resistance.



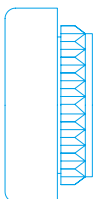
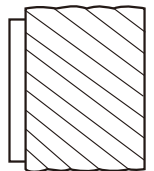
GK-09 Series

Riveting is a simple installation equipment. Which is not only suitable for thin sheet material, but also suitable for hard material.

FASTENERS FOR SPECIAL METAL

GK-10 Series

GK-10 have been designed to provide a hardened steel thread to resist tensile and torsional loading in the softer aluminum and zinc based diecastings. They external spiral knurl cuts into the parent material reducing radial stresses in the casting.



GK-11 Series

Fastener for use to Printed Circuit Board(PCB).

Not need to the solder reflow process.

No special punches needed.

High torque performance.

Available as nuts and studs.

QUALITY CONTROL

Auto Inspection



Projector



Inspection



RoHS Examines machine



Micorscope



PRODUCTION MACHINERY

Auto Thread Forming



Machine of cutting groove



Single Spindle



CNC

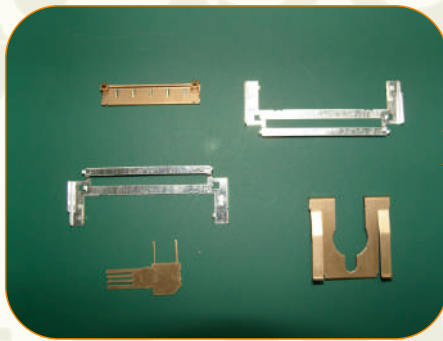




Special parts by 3D Manufacturing



Special parts by 3D Manufacturing



Stamping Parts



Connector Pin



Hand Screw



Auto Fastener

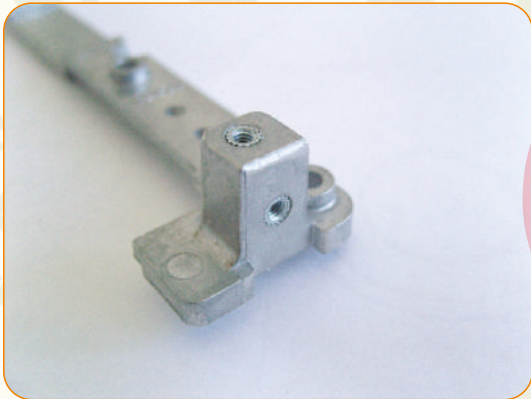


Miniature Panel Fastener
Patented by G.F.S.

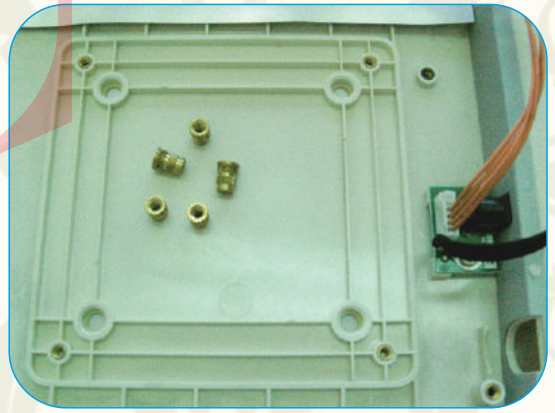
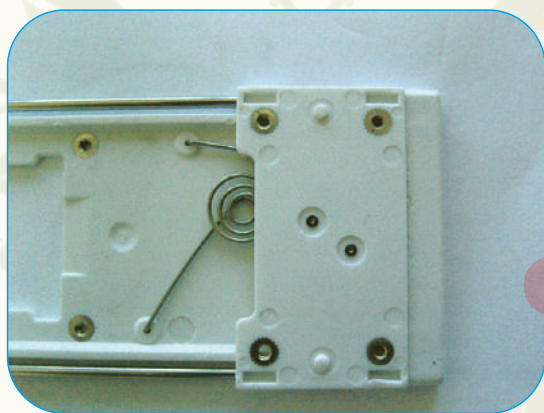


PRODUCT APPLICATION

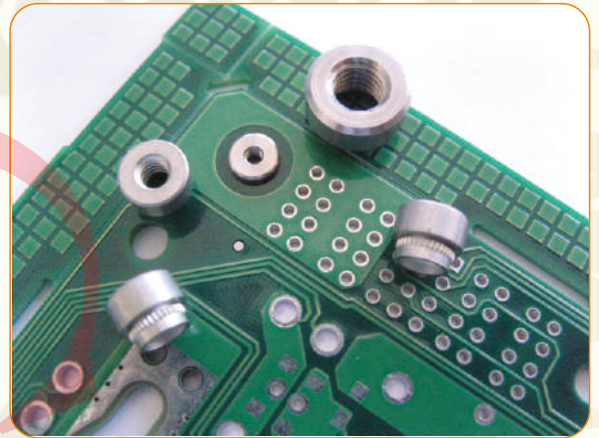
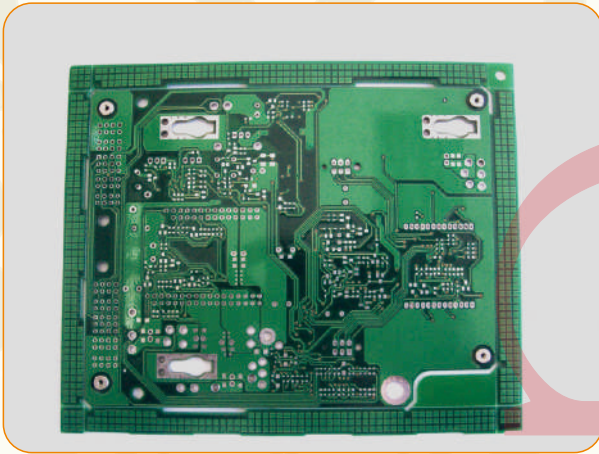
Insert For Light Metal alloy



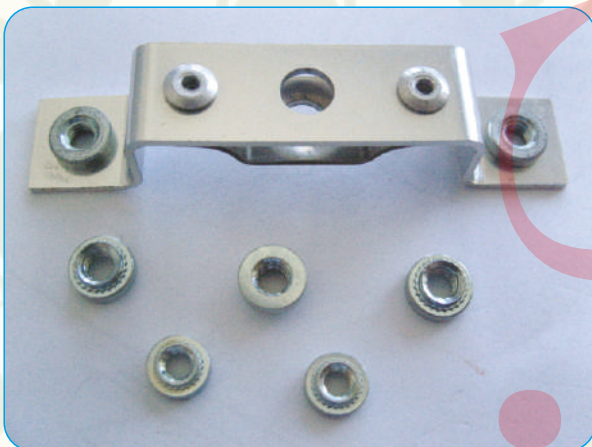
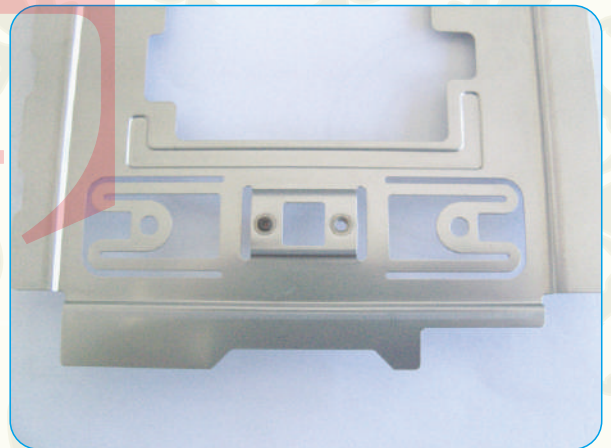
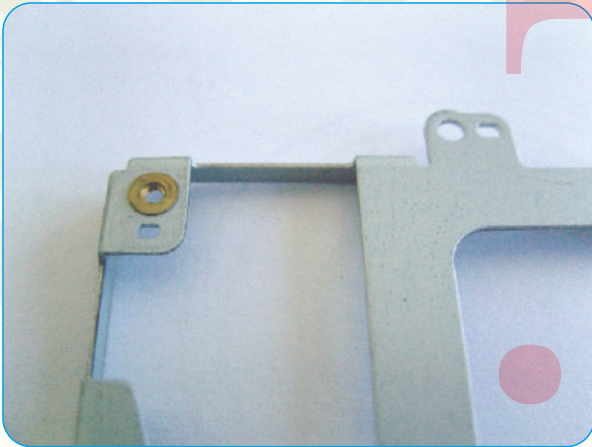
Insert For Plastics



PCB NUT



Sheet Metal Fastener



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G.F.S. Genius Fastener Solutions

Technical details may changes, please contact G.F.S. for latest drawings and specifications. Order conditions and minimum quantities may apply for some products.