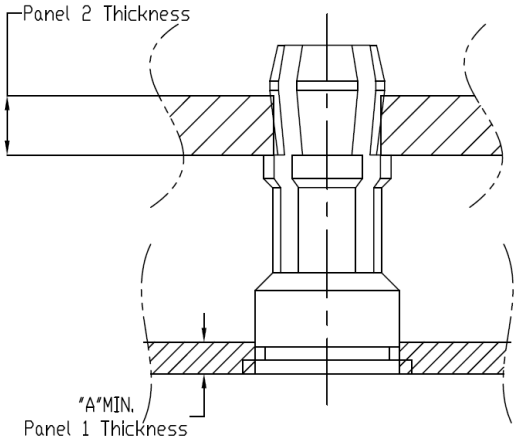
STANDOFF

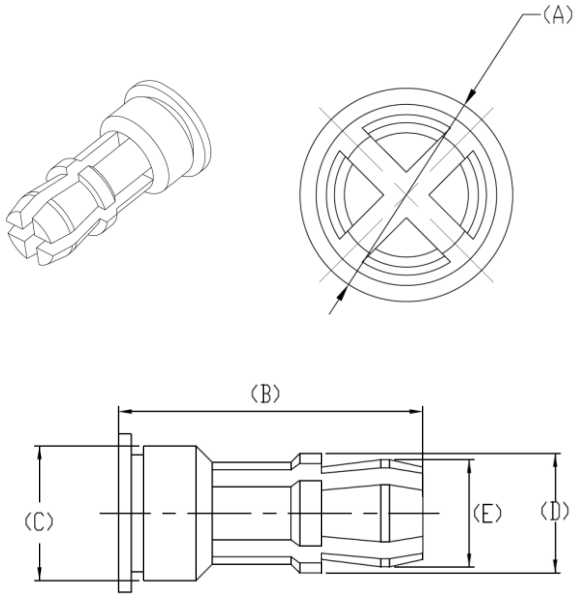
Material and Finish

Standoff：
300 Series stainless steel, natural finish.

Panel Preparation



Installation Style

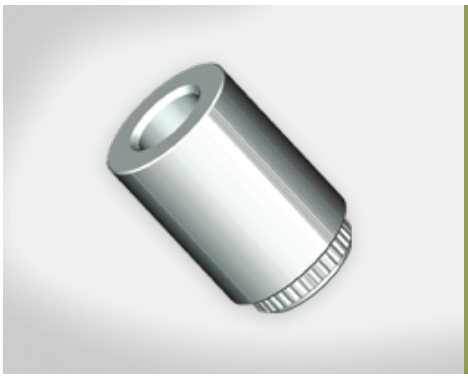


Dimensions(mm)

PANEL1 MIN	PANEL2		(A)	(B)	(C)	(D)	(E)
	MIN	MAX					
1.0	1.6	2.2	6.4	12.3	5.4	4.8	4.3

- Standoff solutions, PC Board style
- Material, sizes could be customized

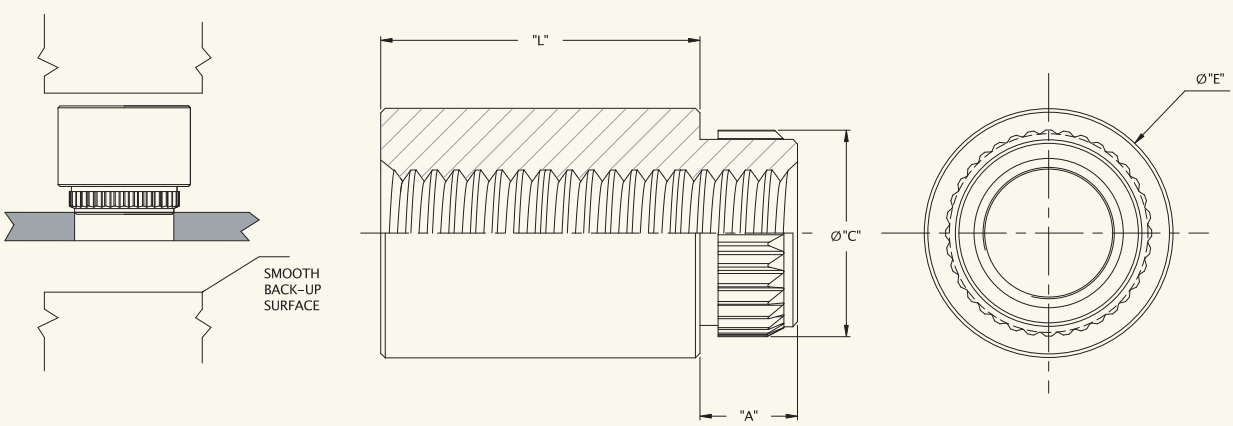
81 SERIES



Material and Finish

Standoffs:
300 series stainless steel, natural.
or carbon steel, zinc (nickel) finish.

Panel Preparation and Installation



Outer Panel Dimensions 1.6mm

mm

THREAD SIZE	MATERIAL AND FINISH		A MAX.	HOLE SIZE IN SHEET +0.08	ØC ±0.08	ØE ±0.13	PART NUMBER "L" ±0.13		
							4	8	12
#4-40	Stainless steel	Clear	1.53	4.22	4.68	5.50	81-240-10-040	81-240-10-080	81-240-10-120
	steel	Nickel	1.53	4.22	4.68	5.50	81-240-23-040	81-240-23-080	81-240-23-120
M3	Stainless steel	Clear	1.53	4.22	4.68	5.50	81-140-10-040	81-140-10-080	81-140-10-120
	steel	Nickel	1.53	4.22	4.68	5.50	81-140-23-040	81-140-23-080	81-140-23-120
#6-32	Stainless steel	Clear	1.53	5.41	5.87	7.00	81-440-10-040	81-440-10-080	81-440-10-120
	steel	Nickel	1.53	5.41	5.87	7.00	81-440-23-040	81-440-23-080	81-440-23-120

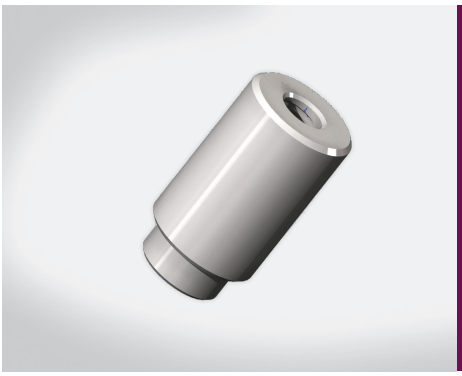
Outer Panel Dimensions 2.3mm

mm

THREAD SIZE	MATERIAL AND FINISH		A MAX.	HOLE SIZE IN SHEET +0.08	ØC ±0.08	ØE ±0.13	PART NUMBER "L" ±0.13		
							4	8	12
#4-40	Stainless steel	Clear	2.23	4.22	4.68	5.50	81-241-10-040	81-241-10-080	81-241-10-120
	steel	Nickel	2.23	4.22	4.68	5.50	81-241-23-040	81-241-23-080	81-241-23-120
M3	Stainless steel	Clear	2.23	4.22	4.68	5.50	81-141-10-040	81-141-10-080	81-141-10-120
	steel	Nickel	2.23	4.22	4.68	5.50	81-141-23-040	81-141-23-080	81-141-23-120
#6-32	Stainless steel	Clear	2.23	5.41	5.87	7.00	81-441-10-040	81-441-10-080	81-441-10-120
	steel	Nickel	2.23	5.41	5.87	7.00	81-441-23-040	81-441-23-080	81-441-23-120

- SMT full automatic reflux welding process can increase production stability and production efficiency
- Welding for reinstallation can increase product reliability
- Reduce a damage risk of circuit caused during assembling
- The specification could be customized
- Functional device which prevents thread damage caused by inflow of tin in SMT process

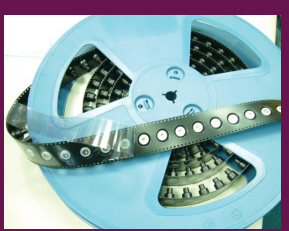
82 SERIES SMT STANDOFF



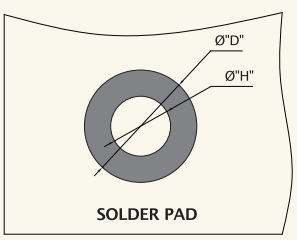
Material and Finish

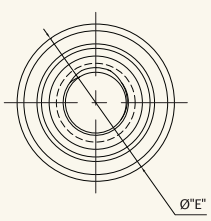
Low carbon steel, tin finish.

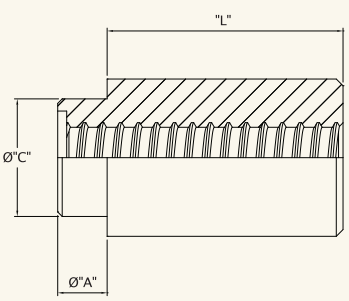
Reel



Stencil Masking Examples







Outer Panel Dimensions 1.0mm

mm

THREAD SIZE	A MAX.	HOLE SIZE IN SHEET +0.08	Ø"D" MIN SOLDER PAD +0.08	ØC ±0.08	ØE ±0.08	PART NUMBER "L" ±0.13		
						4	8	12
M3	1.6	4.22	6.2	4.09	5.50	81-138-22-075	81-138-22-080	81-138-22-105

Outer Panel Dimensions 1.6mm

mm

THREAD SIZE	A MAX.	HOLE SIZE IN SHEET +0.08	Ø"D" MIN SOLDER PAD +0.08	ØC ±0.08	ØE ±0.08	PART NUMBER "L" ±0.13		
						7.5	8.0	10.5
M3.5	1.6	5.41	7.77	5.28	7.0	82-350-22-075	82-350-22-080	82-350-22-105
M3	1.6	4.22	6.2	4.09	5.50	82-150-22-075	82-150-22-080	82-150-22-105

Outer Panel Dimensions 2.3mm

mm

THREAD SIZE	A MAX.	HOLE SIZE IN SHEET +0.08	Ø"D" MIN SOLDER PAD +0.08	ØC ±0.08	ØE ±0.08	PART NUMBER "L" ±0.13		
						7.5	8.0	10.5
M3.5	2.3	5.41	7.77	5.28	7.0	82-351-22-075	82-351-22-080	82-351-22-105
M3	2.3	5.50	6.2	4.09	7.0	82-151-22-075	82-151-22-080	82-151-22-105

Number of Parts Per Reel/Pitch(mm) For Each Size

THREAD SIZE	LENGTH CODE		
	7.5	8.0	10.5
M3.5 M3	500/13	500/13	320/13

STANDOFF

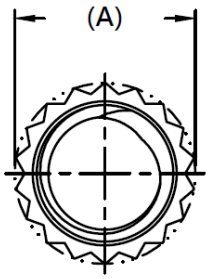
- The specification could be customized.

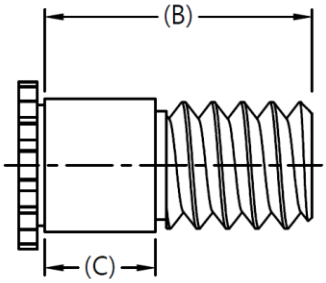
STUD

Material and Finish

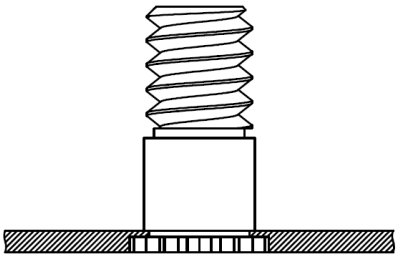
Standoff：
Carbon steel, zinc finish.

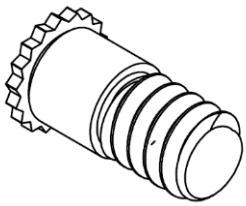
Panel Preparation





Installation Style





Dimensions

THREAD	(A)	(B)		(C)	
		A MIN	A MAX	A MIN	A MAX
#6-32	4.5	6.0	20.0	0.8	2.0
#4-40	4.5	6.0	20.0	0.8	2.0
M3	4.5	6.0	20.0	0.8	2.0
M4	4.5	6.0	20.0	0.8	2.0

STANDOFF

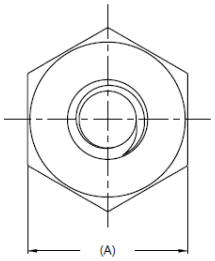
- Customized material and size

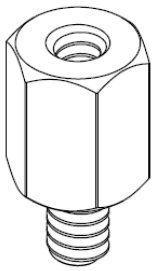
81 SERIES STANDOFF

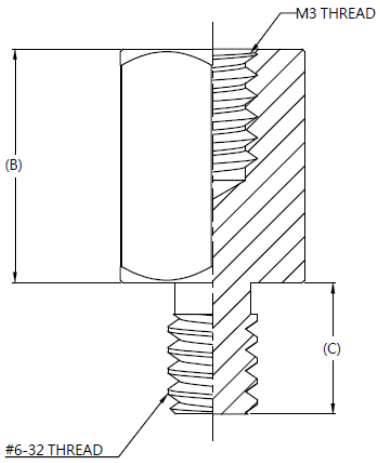
Material and Finish

Nut：
Carbon steel, zinc finish.

Panel Preparation





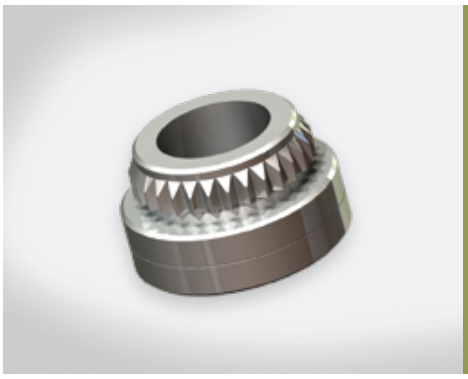


Dimensions(mm)

PANEL THIVKNESS		(A)	(B)	(C)
MIN	MAX			
1.6		Hex. 7.0	9.0	5.0

- Nut solutions, PC Board style
- Material, sizes could be customized

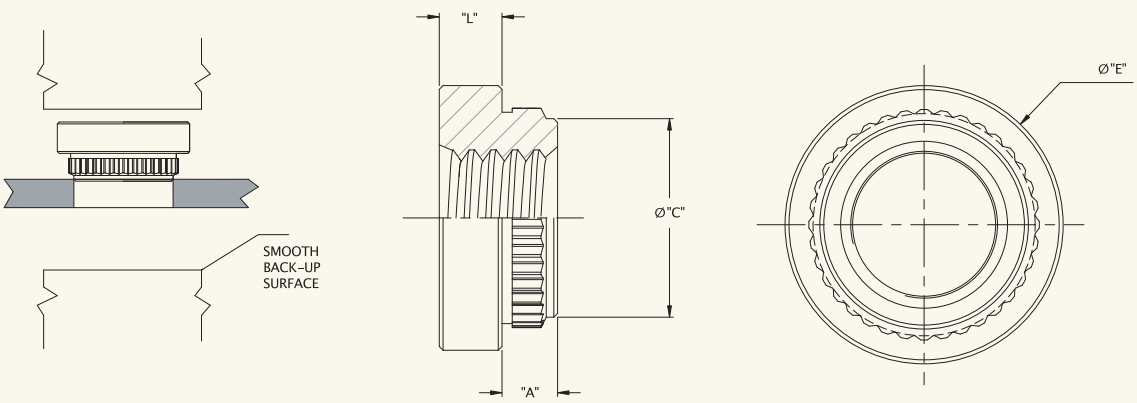
82 SERIES



Material and Finish

Nut:
300 series stainless steel, natural.
or carbon steel, zinc (nickel) finish.

Panel Preparation and Installation



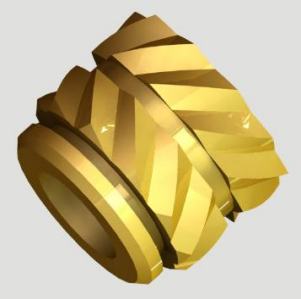
Outer Panel Dimensions 1.6mm

THREAD SIZE	MATERIAL AND FINISH		A MAX.	HOLE SIZE IN SHEET +0.08	ØC ±0.08	ØE ±0.13	PART NUMBER "L" ±0.13		
							1.5	2.0	2.5
#4-40	Stainless steel	Clear	1.53	4.22	4.68	5.50	82-240-10-015	82-240-10-020	82-240-10-025
	steel	Nickel	1.53	4.22	4.68	5.50	82-240-23-015	82-240-23-020	82-240-23-025
M3	Stainless steel	Clear	1.53	4.22	4.68	5.50	82-140-10-015	82-140-10-020	82-140-10-025
	steel	Nickel	1.53	4.22	4.68	5.50	82-140-23-015	82-140-23-020	82-140-23-025
#6-32	Stainless steel	Clear	1.53	5.41	5.87	7.00	82-440-10-015	82-440-10-020	82-440-10-025
	steel	Nickel	1.53	5.41	5.87	7.00	82-440-23-015	82-440-23-020	82-440-23-025

NUT

- Nut solutions, PC Board style.
- The specification could be customized.

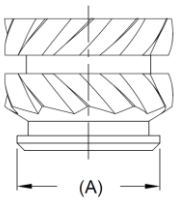
INSERT NUT

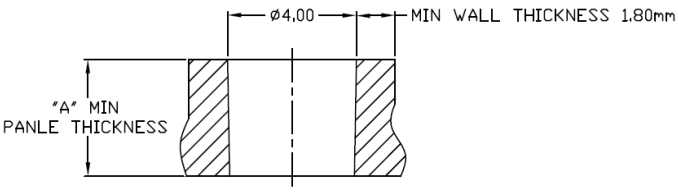


Material and Finish

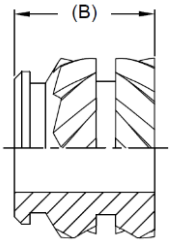
Material：
Brass.

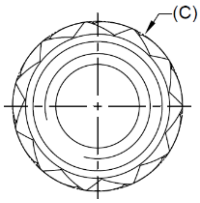
Panel Preparation





Installation Style



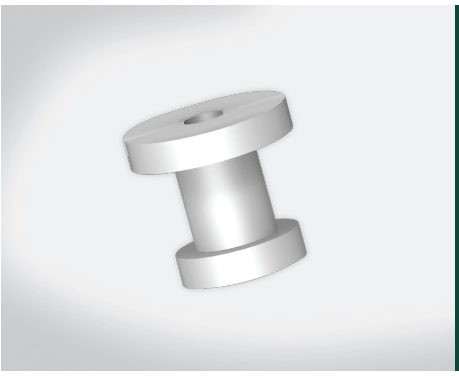


Dimensions(mm)

THREAD	OUTER PANEL DIMENSIONS		(A)	(B)	(C)
	A MIN	A MAX			
#4-40	3.8	-	3.9	3.6	4.6
M3	3.6	-	4.0	3.4	4.4
#6-32	4.0	-	5.2	3.8	5.6

- Simply assemble to punch nut into panel.
- Able to achieve the energy-saving of splitting connector effectively
- Suitable for various thickness & material of panel

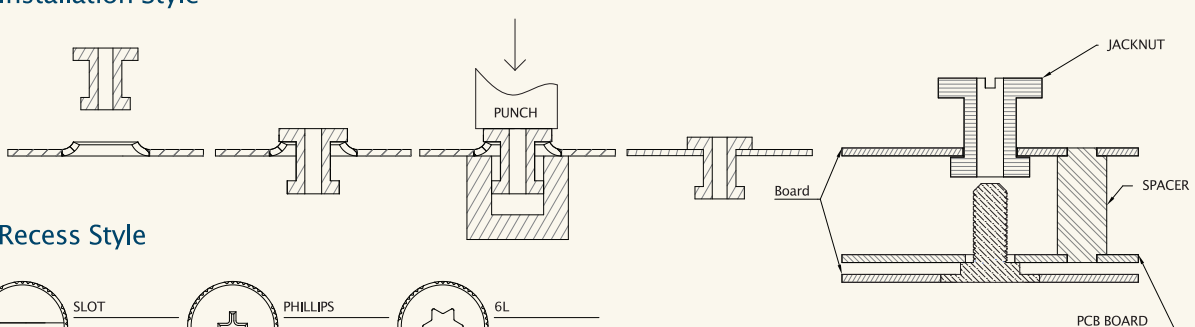
91 SERIES



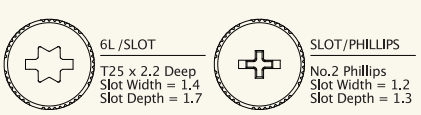
Material and Finish

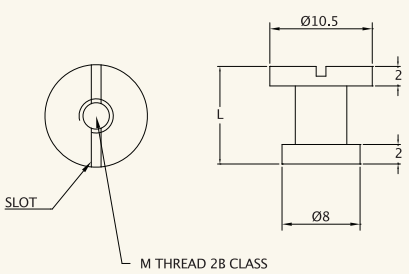
Nut:
300 Series stainless steel
Hardened carbon steel, zinc finish.

Installation Style

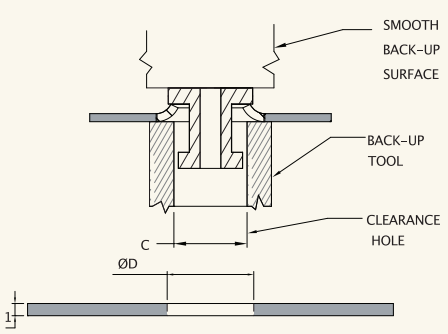


Recess Style





Styled Knob Series
Panel Preparation and Installation



Dimensions

mm

THREAD	OUTER PANEL DIMENSIONS		SCREW PROJECTION	ØD HOLE SIZE	TOTAL FLOAT	ØD	Clearance Hole +0.2 (+.008) -0.1 (-.004)	PART NUMBER				
	A MIN	A MAX	L					Slot Recess	Phillips Recess	6L Recess	6L/Slot Recess	Slot/Phillips Recess
M3	1.0	~	10.0	7.1	0.7	$7.1\ ^{+.08}_{-.0}$ ($.118\ ^{+.003}_{-.000}$)	8.3(.326)	91-110	91-120	91-130	91-140	91-150
#4-40								91-210	91-220	91-230	91-240	91-250
#6-32	1.0	~	10.0	7.1	0.5			91-310	91-320	91-330	91-340	91-350

- Eight-star-shape float nut design overcomes over offset of screw fixing
- Press-in mounting joint quick assembly
- High assembling strength design avoids common risk of losing nut
- The specification could be customized

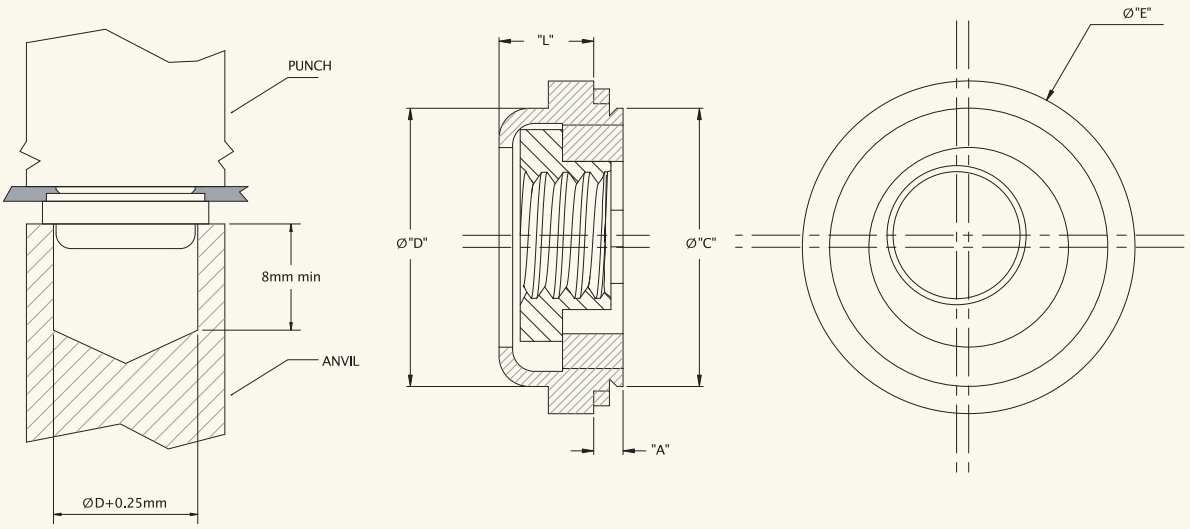
84 SERIES patented.

Material and Finish

Retainer:
Low carbon steel, zinc finish.

Nut:
Low carbon steel, zinc finish.

Panel Preparation and Installation



Outer Panel Dimensions "A" Min 1.0mm

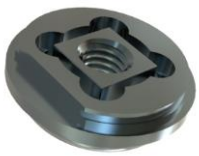
mm

THREAD SIZE	A MAX.	ØC MAX.	ØD MAX.	ØE ±0.2	HOLE SIZE IN SHEET +0.08	TOTAL FLOAT	PART NUMBER "L" Max.
							3.31
M4	0.97	9.33	9.28	11.18	9.4	0.8	84-512-24-033
#8-32	0.97	9.33	9.28	11.18	9.4	0.8	84-612-24-033

FLOATING NUT SERIES

- Floating nut design solves over offset of screw fixing problem.
- Press-in mounting joint quick assembly.
- High assembling strength design avoids common risk of losing nut.
- Floating allowance specification can be customized.

FLOATING NUT-84 SERIES

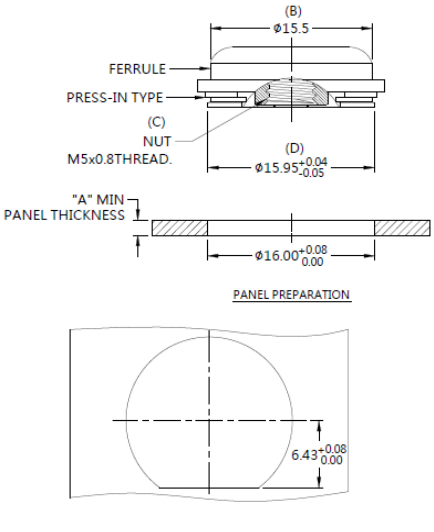


Material and Finish

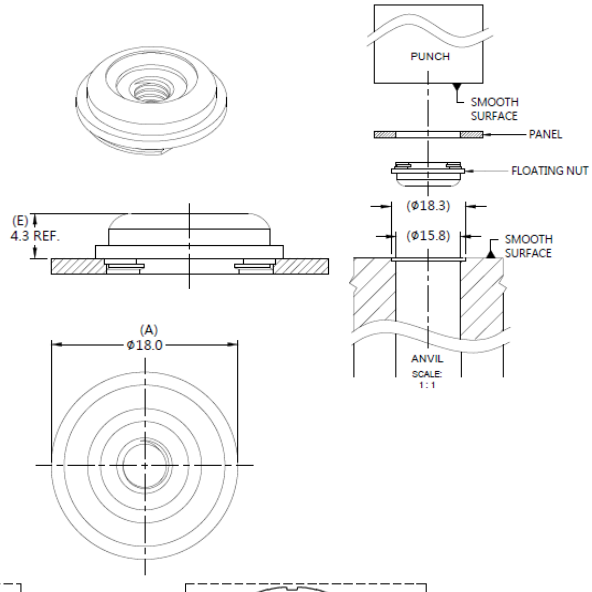
FERRULE: CARBON STEEL , ZINC FINISH.

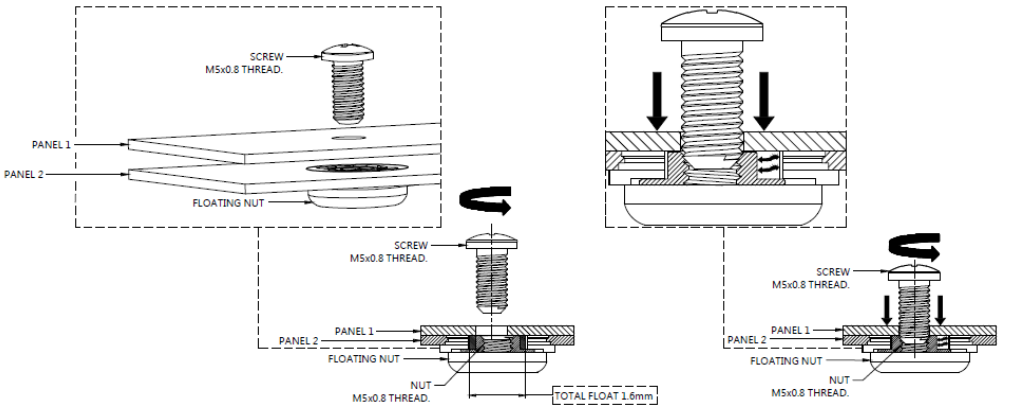
NUT: CARBON STEEL , ZINC FINISH.

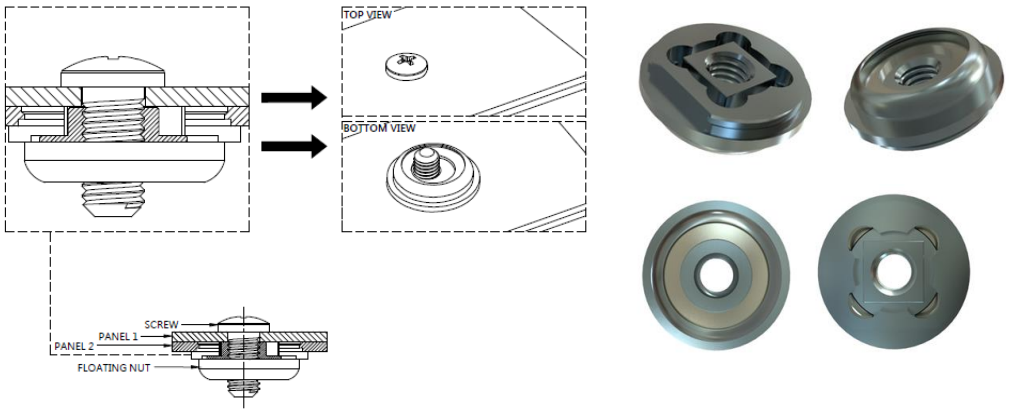
Panel Preparation



Installation







STANDOFF

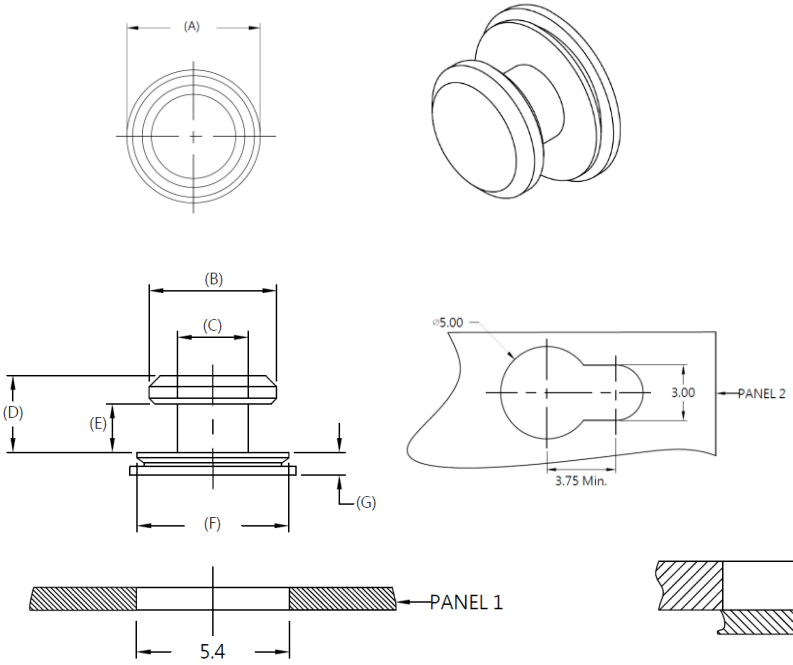
- The specification could be customized.

SPOOL

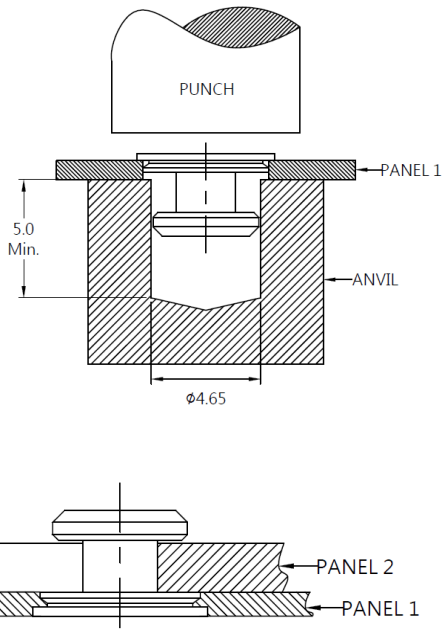
Material and Finish

Standoff：
Carbon steel, zinc finish.

Panel Preparation



Installation Style



Dimensions(mm)

PANEL1 (MIN)	PANEL2 (MAX)	(A)	(B)	(C)	(D)	(E)	(F)	(G)
0.8	1.6	5.85	4.5	2.5	2.7	1.7	5.35	0.8

STANDOFF

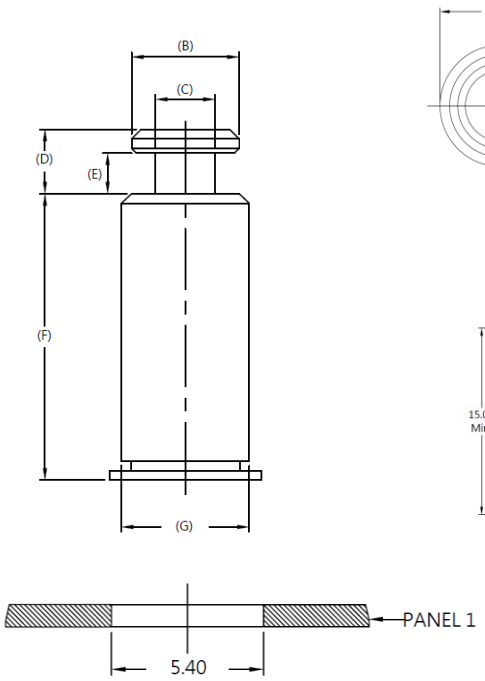
- The specification could be customized.

SPOOL

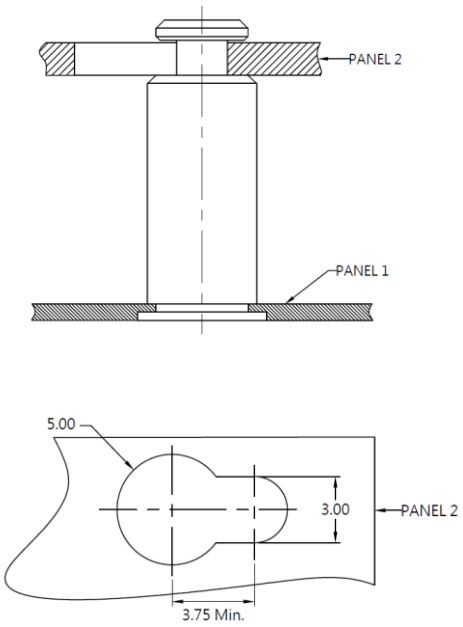
Material and Finish

Standoff：
Carbon steel, zinc finish.

Panel Preparation



Installation Style



Dimensions(mm)

PANEL1 MIN	PANEL2 MAX	(A)	(B)	(C)	(D)	(E)	(F)	(G)
0.8	1.6	6.35	4.5	2.5	2.7	1.7	12.0	5.35

SPRING SPOOL

- Spring force increases spool securing tightness
- Decreases loosening possibility caused by vibration
- Spool designed for easy assembly, quick release purposes
- Lateral fastening contributes to direction limited panels

SPRING SPOOL Patented.

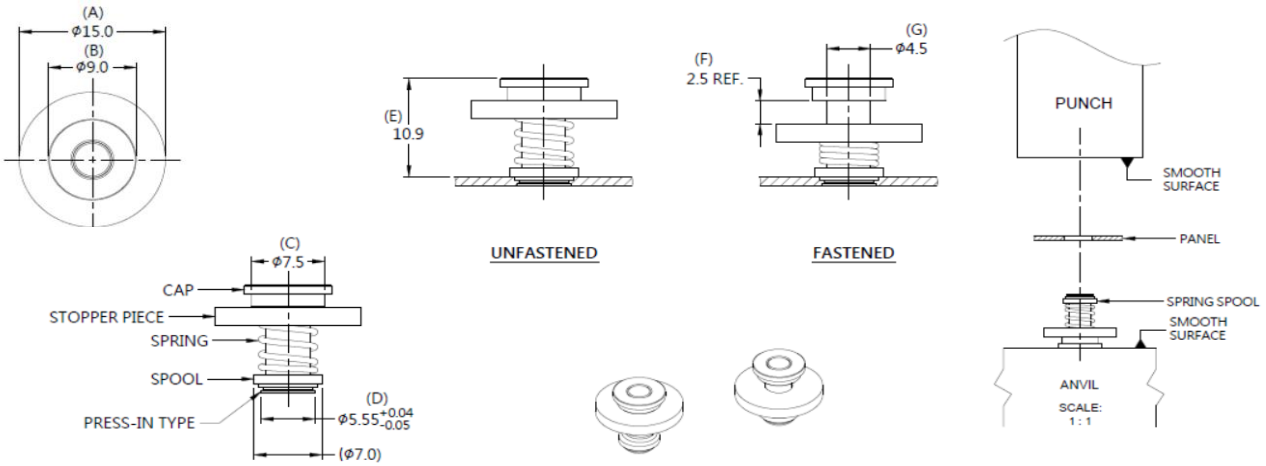
Material and Finish

CAP: CARBON STEEL, ZINC FINISH

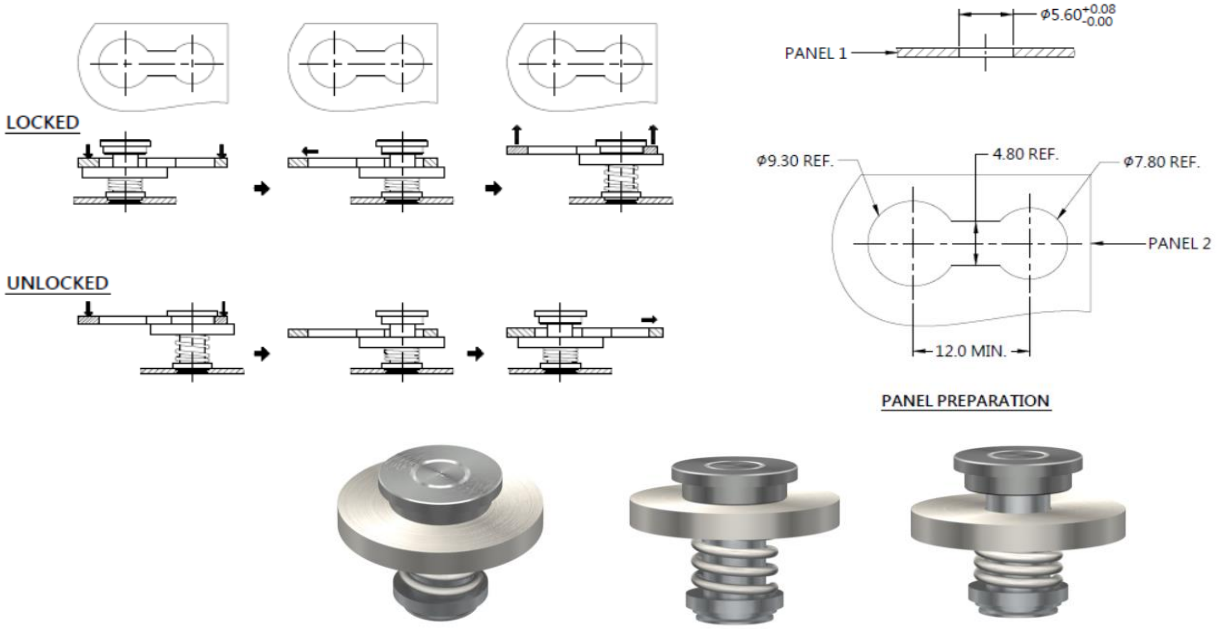
SPOOL: CARBON STEEL, ZINC FINISH

SPRING: 300 SERIES STAINLESS STEEL, NATURAL FINISH

STOPPER PIECE: 300 SERIES STAINLESS STEEL, NATURAL FINISH



INSTALLATION



Dimensions (mm)

LENGTH "T"	PROJECTION		PANEL THICKNESS		DIMENSINOS	
	"P-1"	"P-2"	PANEL 1	PANEL 2	" L "	" B "
~	~	~	1.6 MIN.	2.4 MAX.	~	~

STANDOFF

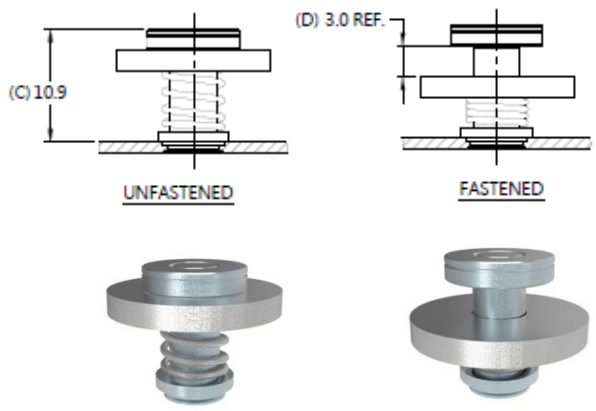
- Spring force increases spool securing tightness
- Decrease loosening possibility caused by vibration
- Spool designed for easy assembly, quick release purposes
- Lateral fastening contributes to direction limited two panels

Spring Spool **Patented.**

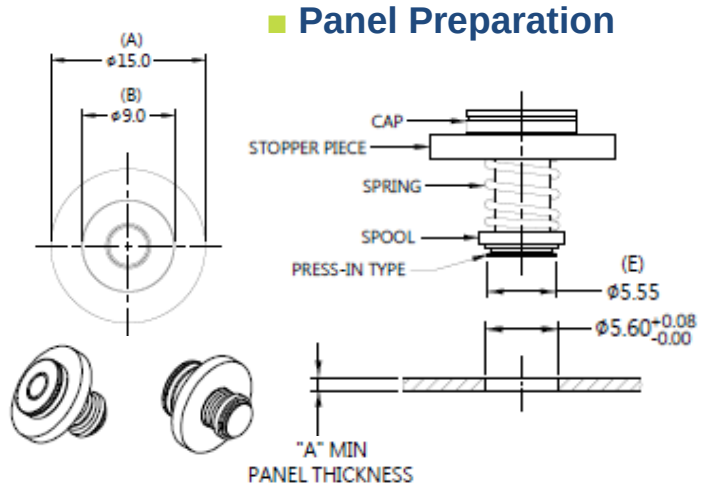
Material and Finish

Cap：
Carbon Steel, Zinc Finish
Spool：
Carbon Steel, Zinc Finish
Spring：
300 Series Stainless Steel, Natural Finish.
Stopper Piece：
300 Series Stainless Steel, Natural Finish.

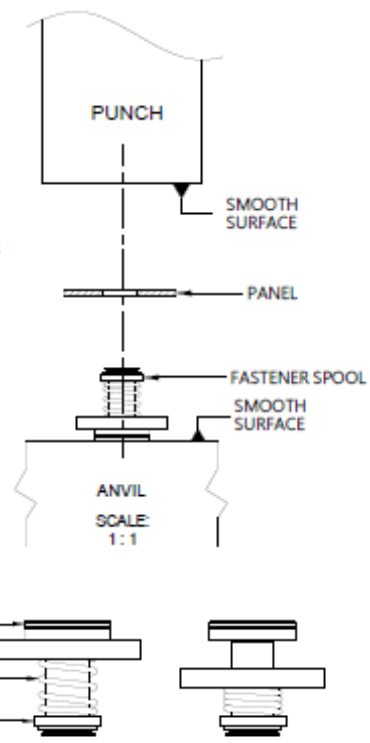
Projection



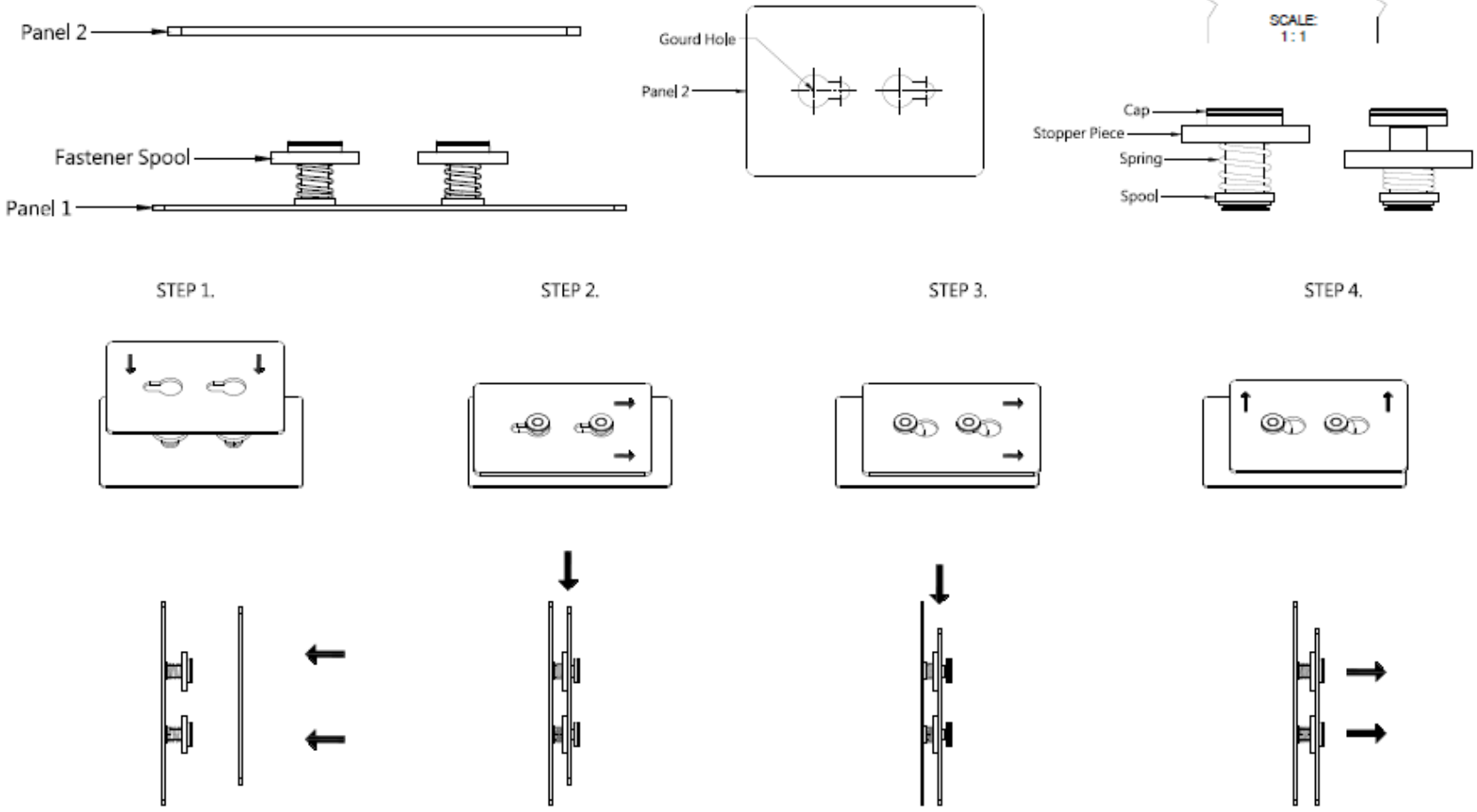
Panel Preparation



Installation



Application



Dimensions (mm)

SCREW LENGTH "T"	SCREW PROJECTION		PANEL THICKNESS		DIMENSINOS	
	"P-1"	"P-2"	"A" MIN	"A" MAX	" L "	" B "
~	~	~	1.0	~	~	~

STANDOFF

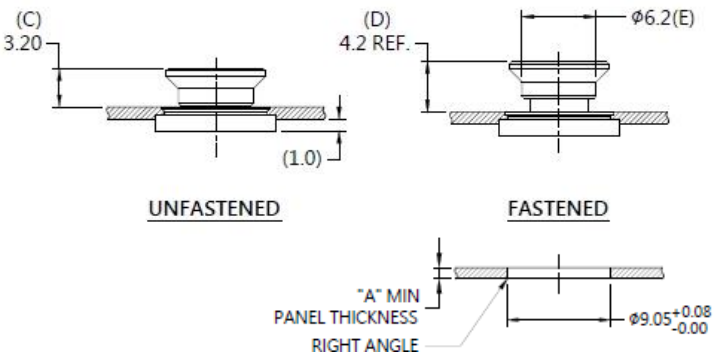
- Spring force increases spool securing tightness.
- Decreases loosening possibility caused by vibration.
- Spool designed for easy assembly, quick release purposes.
- Lateral fastening contributes to direction limited panels.

SPRING LOCK Patented.

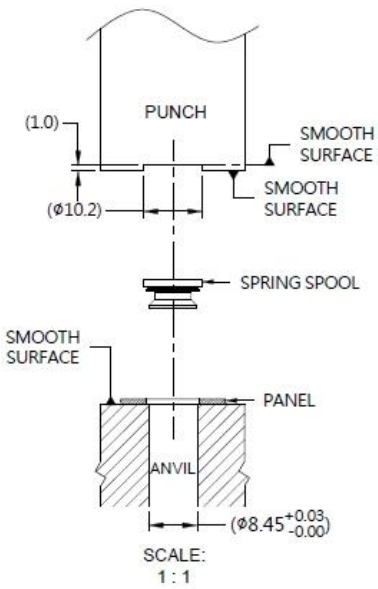
Material and Finish

Ferrule :
Carbon steel, Zinc Finish.
Cap :
300 Series Stainless Steel, Natural Finish.
Rivet :
300 Series Stainless Steel, Natural Finish.
Spring :
300 Series Stainless Steel, Natural Finish.

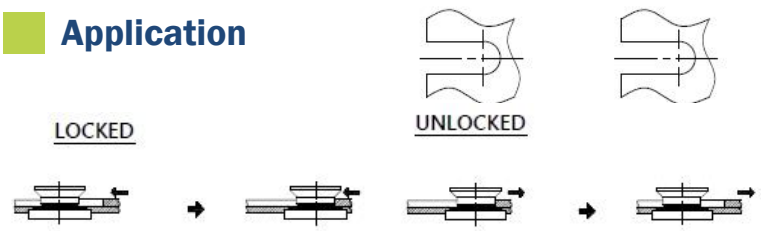
Projection



Installation Style



Application



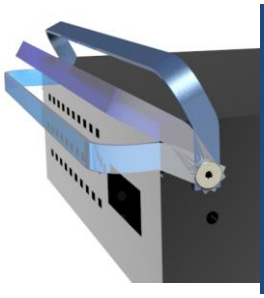
Dimensions (mm)

P/N	PANEL THICKNESS "A"	
	MIN	MAX
108-21211-032-01	1.0	~

MINI HINGE

- The specification could be customized.

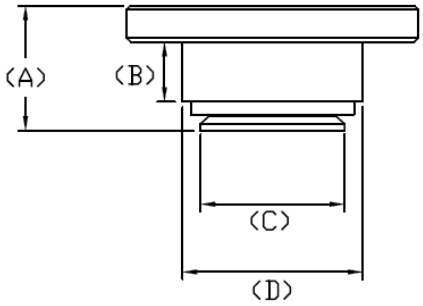
MINI HINGE

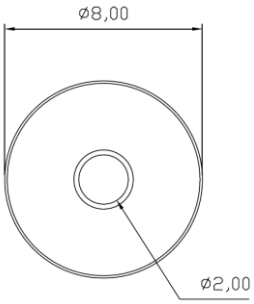


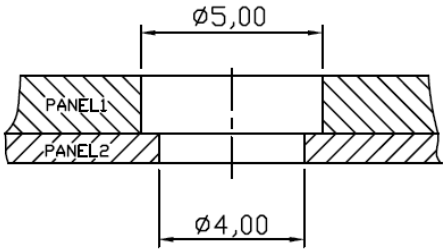
Material and Finish

300 series stainless steel.
Natural finish.

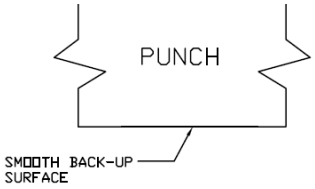
Panel Preparation

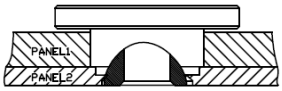


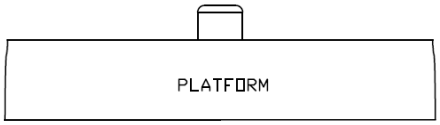




Installation Style







Dimensions(mm)

PANEL1	PANEL2	(A)	(B)	(C)	(D)
1.5	0.8	3.45	1.65	3.98	4.98
1.0	1.0	3.45	1.65	3.98	4.98
0.8	1.2	3.45	1.65	3.98	4.98

MINI HINGE

- The specification could be customized.

MINI HINGE

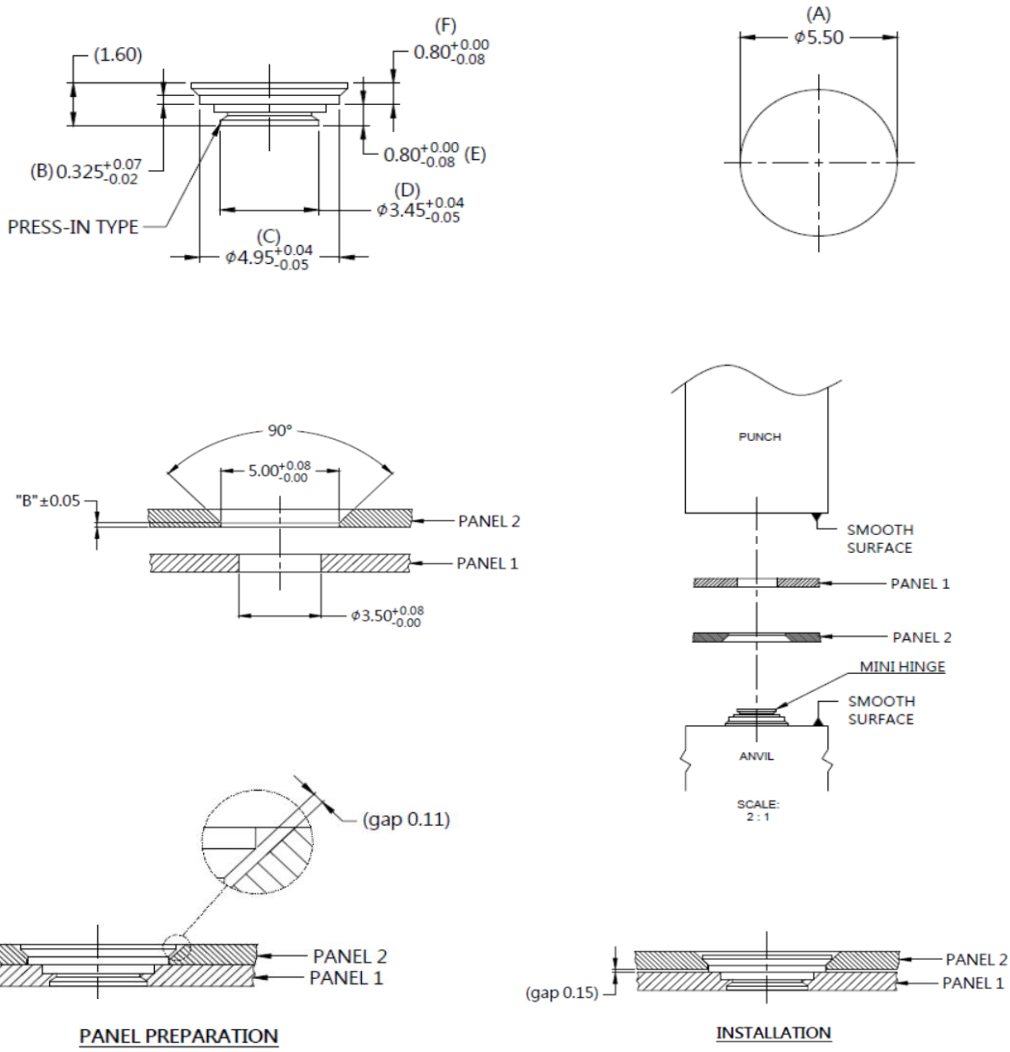
Patented.

Material and Finish

MINI HINGE :

300 SERIES STAINLESS STEEL , NATURAL FINISH .

Panel Preparation



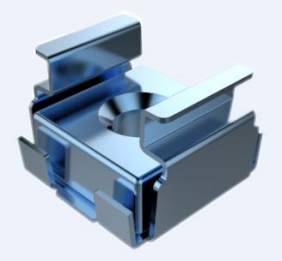
Dimensions (mm)

SCREW LENGTH "T"	SCREW PROJECTION		PANEL THICKNESS		DIMENSINOS	
	P-1	P-2	PANEL1	PANEL2	"L"	"B"
~	~	~	0.8	0.8	~	0.2

Cage Nut

- Cage Nut for Equipment Rack
- The most common use in square-holed 19-inch racks
- Material, size could be customized
- Cage nut is easy to use on thin/soft metal to be threaded.

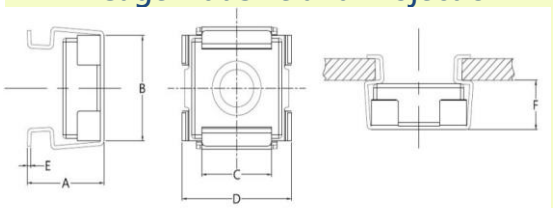
Cage Nut for Equipment Rack

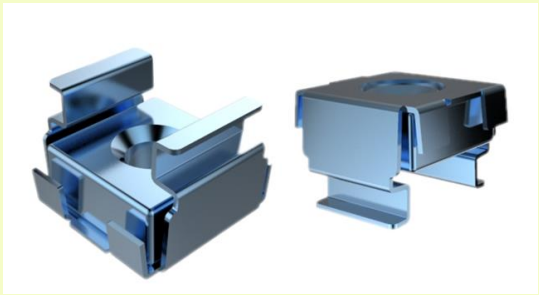


Material and Finish

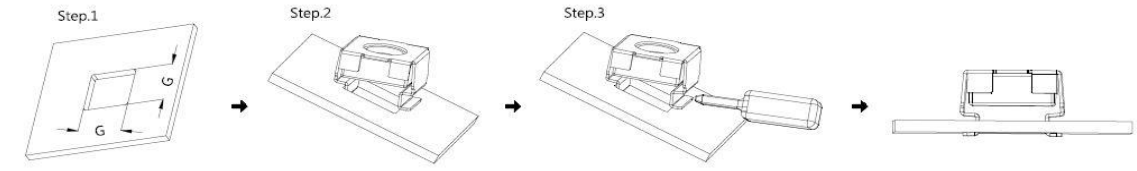
Cage :
Carbon steel , zinc finish .
Nut :
Carbon steel , zinc finish .
Common Size:
10-32
12-24
M5-0.8 : 5 mm outside diameter and 0.8 mm pitch, for light medium equipment Rack
M6-1.0: for heavier equipment such as servers

Cage Nut Size and Projection





Panel Preparation and Installation



Select the appropriate holes

Insert the one side of the Cage Nut into the hole

Using the tool or screwdriver to go into the other side

Complete

Dimensions

Thread Type	Sheet Thickness	A ±0.5	B ±0.5	C ±0.5	D -0.6	E	F ±0.5	G ±0.1
M3	0.3~0.9	5.2	8.8	4.8	9.3	0.3	3.6	5.3
	1~1.6	5.9	8.8	4.8	9.3	0.3	3.6	5.3
M4	0.3~0.9	5.2	8.8	4.8	9.3	0.3	3.6	5.3
	1~1.6	5.9	8.8	4.8	9.3	0.3	3.6	5.3
	0.3~1.1	8.5	11.4	7.2	12	0.45	6	8.3
	1.2~1.6	9	11.4	7.2	12	0.45	6	8.3
	0.7~1.6	9	12	8	13.2	0.45	6.2	9.5
	1.7~2.7	10	12	8	13.2	0.45	6.2	9.5
M5 #10-32	0.3~1.1	8.5	11.4	7.2	12	0.45	6	8.3
	1.2~1.6	9	11.4	7.2	12	0.45	6	8.3
	0.7~1.6	9	12	8	13.2	0.45	6.2	9.5
	1.7~2.7	10	12	8	13.2	0.45	6.2	9.5
M6	0.3~1.1	8.5	11.4	7.2	12	0.45	6	8.3
	1.2~1.6	9	11.4	7.2	12	0.45	6	8.3
	0.7~1.6	9	12	8	13.2	0.45	6.2	9.5
	1.7~2.7	10	12	8	13.2	0.45	6.2	9.5
M8	1~1.7	10.4	15.5	10.6	16.4	0.5	7.8	12.3
	1.8~3.2	12	15.5	10.6	16.4	0.5	7.8	12.3
M10	1~1.7	10.4	15.5	10.6	16.4	0.5	7.8	12.3
	1.8~3.2	12	15.5	10.6	16.4	0.5	7.8	12.3

Unit : mm