



TJ

Self-clinching Key-Loc™ Standoffs

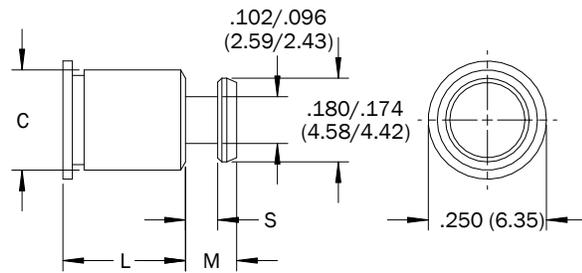
FEATURES

- Join two sheets together by simply sliding the top panel into place to precisely space removable components.
- Use several TJ Key-Loc™ Standoffs with one standard threaded standoff to prevent unwanted top sheet movement, and reduce installation time and excess hardware.
- Self-clinching design installs easily and permanently with a flush appearance on the back of thin panels.
- Available in a wide variety of sizes with custom dimensions by request.



PART DESCRIPTION EXAMPLE

TJSS — .212 — .060 — .375 — P
 T T T T T
 Material Body Panel Length Finish
 Code Diameter Thickness Code Code



Dimensions in inches (millimeters)

GENERAL

All dimensions in inches

INCH	Body Diameter Code	Panel Thickness Code	C Max.	S ±.003	M Max.
	.212	.060	.212	.068	.108
.212	.090	.212	.098	.138	

All dimensions in millimeters

METRIC	Body Diameter Code	Panel Thickness Code	C Max.	S ±0.08	M Max.
	5.39	1.52	5.39	1.73	2.75
5.39	2.29	5.39	2.49	3.51	

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LENGTH

All dimensions in inches

INCH	L (Length) ±.005												
	.063	.125	.188	.250	.312	.375	.437	.500	.562	.625	.750	.875	1.000

All dimensions in millimeters

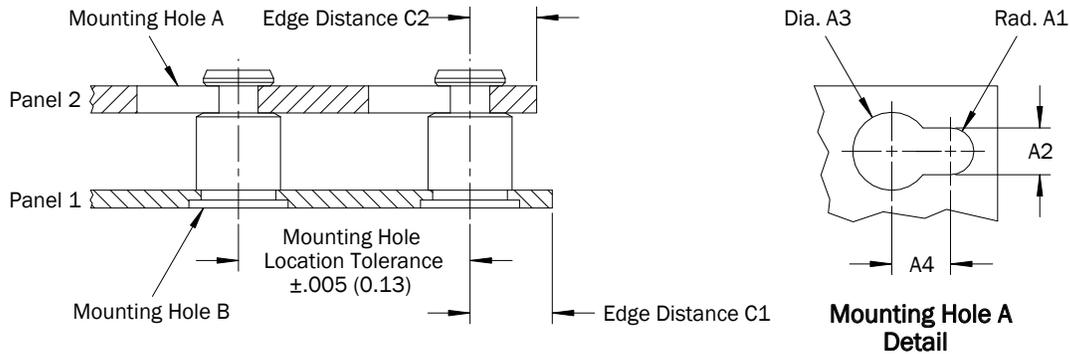
METRIC	L (Length) ±0.13											
	2	4	6	8	10	12	14	16	18	20	22	25

MATERIAL AND FINISH

Material Code	Material Description	Finish Code	Finish Description	For Use in Sheet Hardness	
				HRB 70 Max.	HRB 88 Max.
STL	Heat Treated Carbon Steel	Z	Zinc (SC1) with Type III Clear Chromate per ASTM B 633	•	
SS	300-Series Stainless Steel	P	Passivated and/or tested per ASTM A 967	•	
S4	Heat Treated 400-Series Stainless Steel	P	Passivated and/or tested per ASTM A 967		•

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APPLICATION



Dimensions in inches (millimeters)

All dimensions in inches

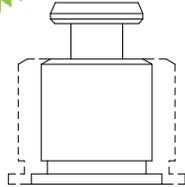
INCH	Panel Thickness Code	Panel 1				Panel 2						
		Mounting Hole B +.003 -.000	Sheet Hardness	Sheet Thickness Min.	Edge Distance C1 Min.	Mounting Hole A				Material	Thickness	Edge Distance C2 Min.
						A1 Nom.	A2 ±.003	A3 ±.003	A4 Min.			
.060	.213	(1)	.040	.260	.059	.118	.197	.148	Any	.057-.064	.160	
.090	.213	(1)	.040	.260	.059	.118	.197	.148	Any	.087-.094	.160	

All dimensions in millimeters

METRIC	Panel Thickness Code	Panel 1				Panel 2						
		Mounting Hole B +0.08 -0.00	Sheet Hardness	Sheet Thickness Min.	Edge Distance C1 Min.	Mounting Hole A				Material	Thickness	Edge Distance C2 Min.
						A1 Nom.	A2 ±0.08	A3 ±0.08	A4 Min.			
1.52	5.41	(1)	1.02	6.60	1.50	3.00	5.00	3.75	Any	1.45-1.62	4.10	
2.29	5.41	(1)	1.02	6.60	1.50	3.00	5.00	3.75	Any	2.22-2.39	4.10	

(1) See Material and Finish table for sheet hardness.

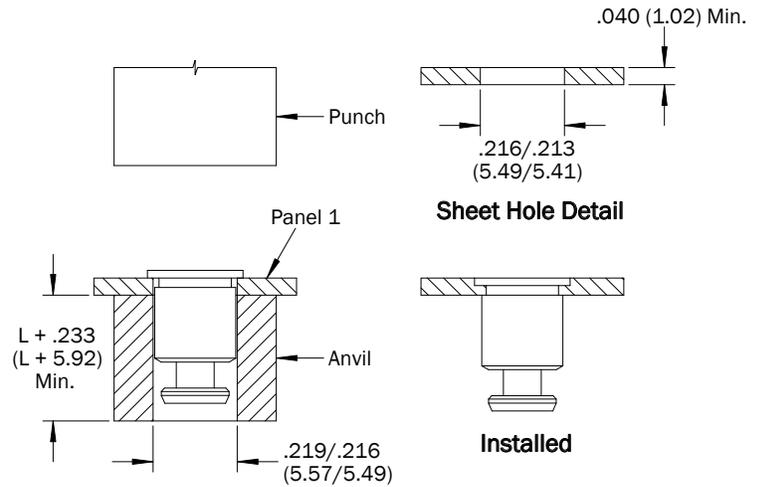
OPTION



TJ Standoffs may be ordered with a larger body diameter for increased panel support area. Contact a PENCOM Technical Representative for more information.

INSTALLATION

1. Punch or drill hole in sheet. Do not deburr hole edges.
2. Insert standoff through hole in sheet and into the anvil as shown.
3. Squeeze the sheet and standoff head between parallel punch and anvil surfaces. Use only enough pressure to seat the standoff head flush with the sheet. Punch and anvil may be ordered using PENCOM part numbers TL1287 and TL1345, respectively, or made from hardened tool steel.

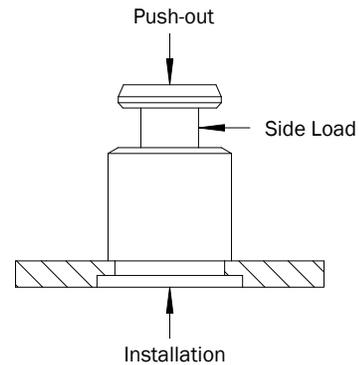


Dimensions in inches (millimeters)

PERFORMANCE (INSTALLATION AND PUSH-OUT)

INCH	Test Sheet Material			
	5052-H34 Aluminum .060" Thick		Cold-Rolled Steel .060" Thick	
	Installation (lbs)	Push-out (lbs)	Installation (lbs)	Push-out (lbs)
	1600	250	3200	600

METRIC	Test Sheet Material			
	5052-H34 Aluminum 1.52mm Thick		Cold-Rolled Steel 1.52mm Thick	
	Installation (kN)	Push-out (N)	Installation (kN)	Push-out (N)
	7.1	1100	14.2	2600



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PERFORMANCE (SIDE LOAD)

INCH	Test Sheet Material 5052-H34 Aluminum										
	.040" Thick					.060" Thick					
	L (Length)										
	.063	.125	.188	.250	.312	.375	.437	.500	.625	.750	1.000
Side Load Max. (lbs)											
130	95	82	63	52	44	38	34	27	22	17	

INCH	Test Sheet Material Cold-Rolled Steel										
	.040" Thick					.060" Thick					
	L (Length)										
	.063	.125	.188	.250	.312	.375	.437	.500	.625	.750	1.000
Side Load Max. (lbs)											
185	120	197	153	126	106	92	81	66	55	42	

METRIC	Test Sheet Material 5052-H34 Aluminum										
	1.02mm Thick				1.52mm Thick						
	L (Length)										
	2	4	6	8	10	12	14	16	18	20	22
Side Load Max. (N)											
545	370	296	228	184	156	136	116	104	96	88	76

METRIC	Test Sheet Material Cold-Rolled Steel										
	1.02mm Thick				1.52mm Thick						
	L (Length)										
	2	4	6	8	10	12	14	16	18	20	22
Side Load Max. (N)											
735	490	696	540	440	372	320	280	252	228	208	184

(1) Performance data represents the average destructive result when all installation specifications are strictly followed. Variations in sheet hole size, thickness, material and installation method will affect the loads. PENCOM strongly encourages testing in the application.