

PEM® Type SGPC™ Swaging Collar Studs

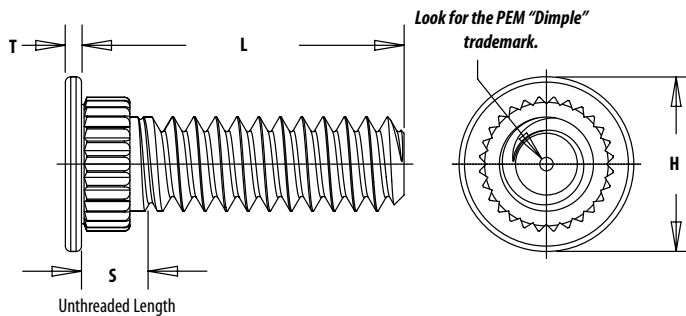


PEM Type SGPC swaging collar studs can install into most panel material, provide strong torque-out resistance and are suitable for close centerline-to-edge situations. These studs can also accommodate multiple panels as long as the total thickness does not exceed the maximum sheet thickness.*



Features and Benefits

- Installs into sheets as thin as .024" / 0.6 mm.
- Can be installed into dissimilar materials.
- Can be installed into most panel materials, including stainless steel.
- Allows for close centerline-to-edge distance.
- Corrosion resistant.
- RoHS compliant.



All dimensions are in inches.

UNIFIED	Thread Size	Type	Thread Code	Length Code "L" ±.015 (Length Code in 16ths of an inch)								Sheet Thickness (1)	Hole Size in Sheet +.003 -.000	Hole Dia. of Attached Panel +.005 - .000	H ±.010	S Max. (2)	T ±.004	Min. Dist. Hole ⌀ to Edge	
		Fastener Material																	
		Stainless Steel																	
	.086-56 (#2-56)	SGPC	256	.312	.375	.500	.625	.750	.875	1.00	1.25	1.50	.024 - .047	.145	.182	.189	.107	.020	.130
	.112-40 (#4-40)	SGPC	440	.312	.375	.500	.625	.750	.875	1.00	1.25	1.50	.024 - .047	.171	.205	.228	.121	.024	.160
	.138-32 (#6-32)	SGPC	632	.312	.375	.500	.625	.750	.875	1.00	1.25	1.50	.024 - .047	.196	.229	.256	.133	.024	.180
	.164-32 (#8-32)	SGPC	832	.312	.375	.500	.625	.750	.875	1.00	1.25	1.50	.024 - .047	.223	.259	.279	.133	.024	.200
	.190-32 (#10-32)	SGPC	032	.312	.375	.500	.625	.750	.875	1.00	1.25	1.50	.024 - .047	.249	.280	.307	.135	.024	.210
	.250-20 (1/4-20)	SGPC	0420	NA	.375	.500	.625	.750	.875	1.00	1.25	1.50	.024 - .047	.309	.343	.366	.173	.028	.250

All dimensions are in millimeters.

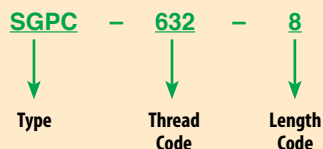
METRIC	Thread Size x Pitch	Type	Thread Code	Length Code "L" ±0.4 (Length Code in millimeters)								Sheet Thickness (1)	Hole Size in Sheet +0.08	Hole Dia. of Attached Panel +0.13	H ±0.25	S Max. (2)	T ±0.1	Min. Dist. Hole ⌀ to Edge	
		Fastener Material																	
		Stainless Steel																	
	M2.5 x 0.45	SGPC	M2.5	8	10	12	15	18	NA	NA	NA	NA	0.6 - 1.2	4	4.95	5	2.7	0.5	3.9
	M3 x 0.5	SGPC	M3	8	10	12	15	18	20	25	NA	NA	0.6 - 1.2	4.5	5.45	6	2.8	0.6	4.3
	M4 x 0.7	SGPC	M4	8	10	12	15	18	20	25	30	NA	0.6 - 1.2	5.5	6.3	7	3.2	0.6	4.9
	M5 x 0.8	SGPC	M5	8	10	12	15	18	20	25	30	35	0.6 - 1.2	6.5	7.45	8	3.5	0.6	5.5
	M6 x 1	SGPC	M6	NA	10	12	15	18	20	25	30	35	0.6 - 1.2	7.5	8.3	9	3.9	0.7	6.2

(1) See installation data for tooling requirements. Contact Technical Support (techsupport@pemnet.com) for other thicknesses.

(2) Threads are gageable to within 2 pitches on the "S" Max. dimension. A class 3B/5H maximum material commercial nut shall pass up to the "S" Max. dimension. NA Not Available.

* When using the fastener to attach more than one sheet or panel, the stud may seem slightly loose after installation. This is a normal condition in some applications and will not effect the stud's performance.

Part Number Designation



Material and Finish Specifications

Fastener Material: 300 series stainless steel
Finish: Passivated and/or tested per ASTM A380
For Use In Any Sheet Hardness.



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Performance Data⁽¹⁾

UNIFIED	Thread Code	Max. Rec. Tightening Torque For Mating Nut (in. lbs.)	Test Sheet Material			
			Single sheet of .039" 300 Series Stainless Steel			
			Installation (lbs.)	Pushout (lbs.)	Torque-out (in. lbs.)	Pull-thru (lbs.)
256	2.3	4000	425	5.2	415	
440	5	5000	450	8	512	
632	9	5500	460	15.8	811	
832	17	6500	480	29.3	1133	
032	27	7300	545	42.8	1273	
0420	58	10000	565	76.7	1721	

METRIC	Thread Code	Max. Rec. Tightening Torque For Mating Nut (N·m)	Test Sheet Material			
			Single sheet of 1 mm 300 Series Stainless Steel			
			Installation (kN)	Pushout (N)	Torque-out (N·m)	Pull-thru (N)
M2.5	0.41	20.1	2546	0.86	2561	
M3	0.74	21.8	2051	1.35	2851	
M4	1.7	28.5	2396	2.66	4000	
M5	3.5	35.6	3200	5.96	4284	
M6	5.9	42.3	3262	9.19	6311	

(1) The values reported are averages when all installation specifications and procedures are followed. Variations in mounting hole size, sheet material and installation procedure will affect this data. Performance testing of this product in your application is recommended. We will be happy to provide samples for this purpose.

Installation

1. Prepare properly sized mounting hole in sheet.
2. Insert fastener through mounting hole as shown in drawing.
3. With punch and anvil surfaces parallel, apply squeezing force until the punch pushes over the protruding knurls of the stud.

UNIFIED	Thread Code	Punch Dimensions (inches)		Punch Part Number	Anvil Dimensions (inches)		Anvil Part Number
		A	B		C	P	
		+0.004 -0.000	+0.000 -0.001		+0.001	+0.000 -0.002	
256	.209	.019	8015111	.087	.014	8016983	
440	.248	.022	8015112	.113	.014	8016984	
632	.276	.022	8015113	.139	.014	8016985	
832	.299	.022	8015114	.165	.014	8016986	
032	.327	.022	8015115	.191	.014	8016987	
0420	.386	.026	8015116	.251	.014	8016988	

METRIC	Thread Code	Punch Dimensions (mm)		Punch Part Number	Anvil Dimensions (mm)		Anvil Part Number
		A	B		C	P	
		+0.1	-0.025		+0.025	-0.05	
M2.5	5.5	0.47	8015117	2.53	0.35	8016989	
M3	6.5	0.57	8015118	3.03	0.35	8016990	
M4	7.5	0.57	8015119	4.03	0.35	8016991	
M5	8.5	0.57	8015120	5.03	0.35	8016992	
M6	9.5	0.67	8015121	6.03	0.35	8016993	

NOTE: For panel design information, go to http://www.pemnet.com/SGPC_Panel_Designs.pdf

RoHS compliance information can be found on our website.
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