

PEM® Type MSO4™ Self-clinching microPEM™ Standoffs

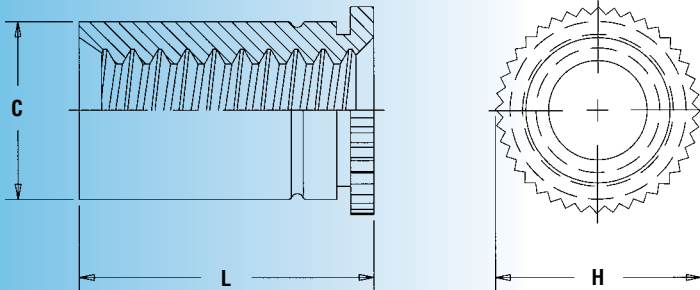
PEM Type MSO4 self-clinching microPEM standoffs are used to space internal components and provide strong, permanent, and reusable load-bearing threads in metal sheets as thin as .016" / 0.4 mm. Smallest standoff size includes 2 mm length with M1 threads. Other metric and unified sizes are also offered.



microPEM™
FASTENERS

Features and Benefits

- Become integral parts of an assembly by clinching permanently in place.
- Will not loosen or fall out.
- Can be installed into stainless steel sheets.
- Can be installed automatically.
- RoHS compliant.



All dimensions are in inches.

UNIFIED	Thread Size	Type	Thread Code	Length Code	Min. Sheet Thickness*	Hole Size In Sheet +.002 - .000	C Max.	H Nom.	L +.002 - .003	Min. Dist. Hole \varnothing To Edge
		Stainless Steel								
	.060-80 (#0-80) (1)	MSO4	080	3	.016	.095	.094	.125	.094	.090
				4					.125	
	.086-56 (#2-56) (1)	MSO4	256	3	.016	.125	.124	.156	.094	.120
				4					.125	

All dimensions are in millimeters.

METRIC	Thread Size	Type	Thread Code	Length Code	Min. Sheet Thickness*	Hole Size In Sheet +0.05	C Max.	H Nom.	L +0.05 - 0.08	Min. Dist. Hole \varnothing To Edge
		Stainless Steel								
	S1 (2)	MSO4	M1	2	0.4	2.41	2.39	3.18	2	2.3
				3					3	
	S1.2 (2)	MSO4	M1.2	2	0.4	2.41	2.39	3.18	2	2.3
				3					3	
	S1.4 (2)	MSO4	M1.4	2	0.4	2.41	2.39	3.18	2	2.3
				3					3	
M1.6 x 0.35 (3)	MSO4	M1.6	2	0.4	2.41	2.39	3.18	2	2.3	
			3					3		
M2 x 0.4 (3)	MSO4	M2	2	0.4	3.18	3.16	3.96	2	3	
			3					3		

* For installation into thinner sheets, contact Tech Support at techsupport@pemnet.com.

MATERIAL AND FINISH SPECIFICATIONS

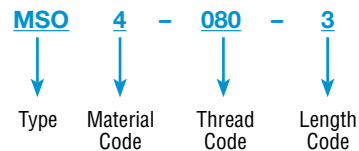
Fastener Material: 400 series stainless steel

Threads: (1) Unified ASME B1.1, 2B
(2) Miniature ISO 1501, 4H6
(3) Metric ASME B1.13M

Finish: Passivated and/or tested per ASTM A380

For Use In Sheet Hardness: HRB 88 / HB 176 or less (4)

PART NUMBER DESIGNATION



(4) HRB - Hardness Rockwell "B" Scale. HB - Hardness Brinell.

PEM[®] Type MSO4[™] Self-clinching microPEM[™] Standoffs

PERFORMANCE DATA⁽¹⁾

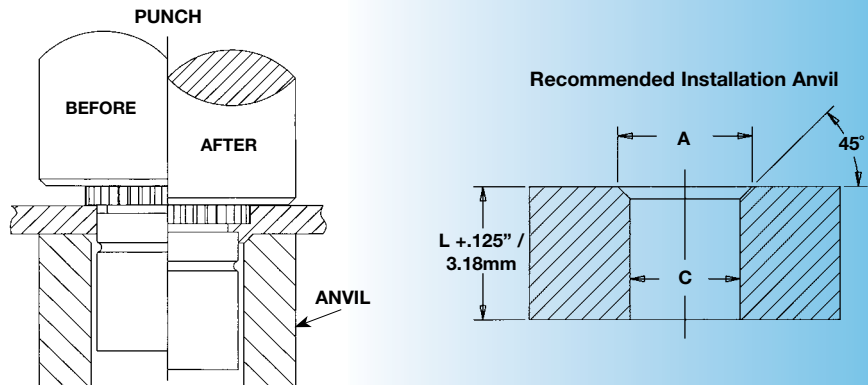
UNIFIED	Thread Code	Max. Rec. Tightening Torque For Mating Screw (in. lbs.)	Test Sheet Material			
			.017" 300 Series Stainless Steel			
			Installation (lbs.)	Pushout (lbs.)	Torque-out (in. lbs.) (2)	Pull-thru (lbs.) (2)
080	.65	2500	64	3	170	
256	1.9	2500	67	7	265	

METRIC	Thread Code	Max. Rec. Tightening Torque For Mating Screw (N•m)	Test Sheet Material			
			0.43mm 300 Series Stainless Steel			
			Installation (kN)	Pushout (N)	Torque-out (N•m) (2)	Pull-thru (N) (2)
M1	.019	11.1	285	0.34	755	
M1.2	.036	11.1	285	0.34	755	
M1.4	.057	11.1	285	0.34	755	
M1.6	.084	11.1	285	0.34	755	
M2	.28	11.1	300	0.79	1175	

- (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 results. Performance testing of this product in your application is recommended. We will be happy to provide samples for this purpose.
- (2) Performance in torque out and pull thru will depend on the strength and type of screw being used. In most cases the failure will be in the screw and not in the self clinching standoff. Please contact our Applications Engineering group with any questions.

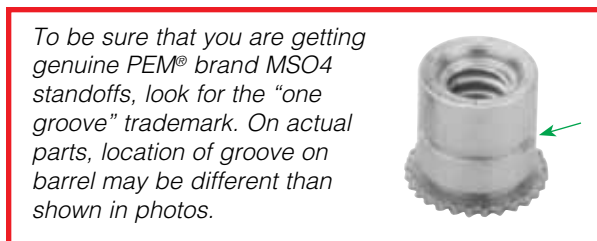
INSTALLATION

1. Prepare properly sized mounting hole in sheet. Do not perform any secondary operations such as deburring.
2. Insert fastener through mounting hole (preferably the punch side) and into anvil as shown in drawing.
3. With punch and anvil surfaces parallel, apply only enough squeezing force to embed the standoff's head flush in the sheet.



UNIFIED	Thread Code	Anvil Dimensions (inches)		Anvil Part Number	Punch Part Number
		A	C		
080	.112 - .114	.097 - .099	8015796	975200997	
256	.142 - .144	.127 - .129	8015797	975200997	

METRIC	Thread Code	Anvil Dimensions (millimeters)		Anvil Part Number	Punch Part Number
		A	C		
M1	2.84 - 2.89	2.46 - 2.51	8015796	975200997	
M1.2	2.84 - 2.89	2.46 - 2.51	8015796	975200997	
M1.4	2.84 - 2.89	2.46 - 2.51	8015796	975200997	
M1.6	2.84 - 2.89	2.46 - 2.51	8015796	975200997	
M2	3.6 - 3.65	3.22 - 3.27	8015797	975200997	



RoHS compliance information can be found on our website.
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