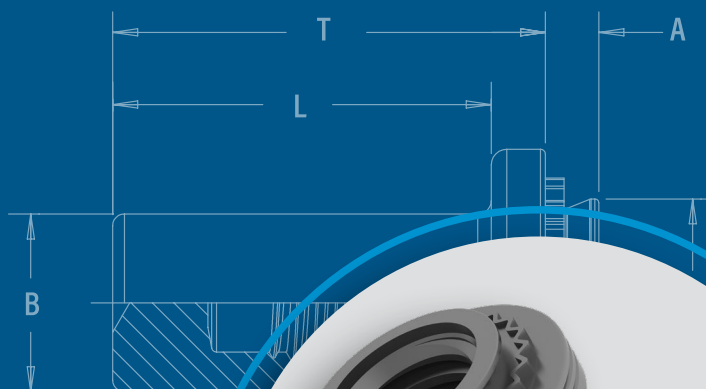
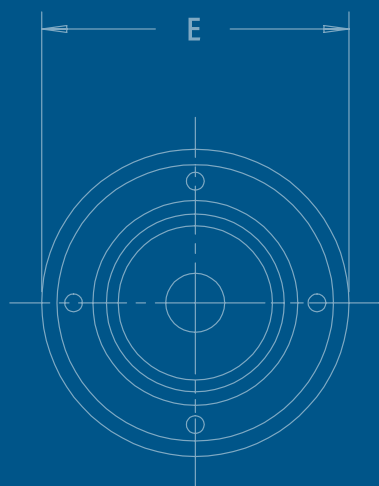




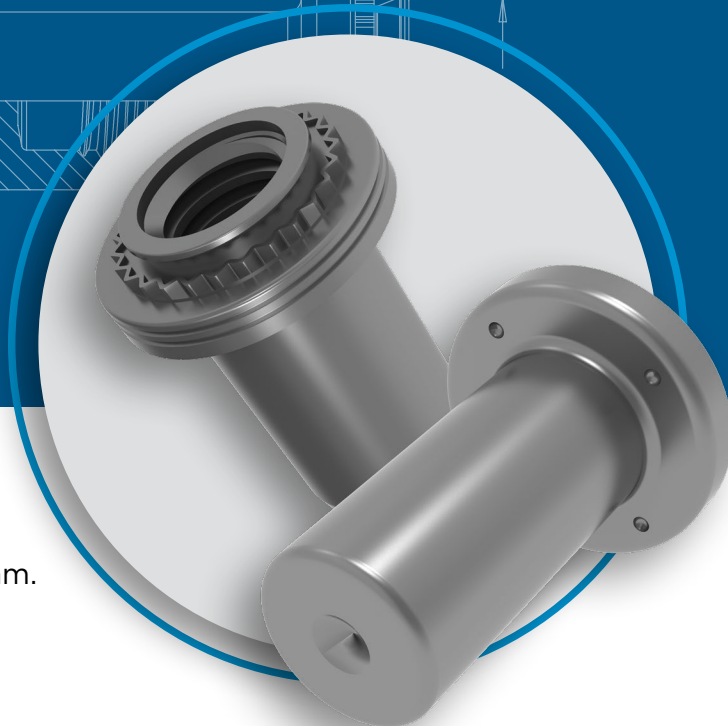
BTM

SELF-CLINCHING BLIND NUTS



PEM® brand self-clinching blind nuts provide permanently mounted blind threads in metal sheets as thin as .040"/1 mm.

NOW AVAILABLE - Fine Finish Blind nuts (BFTM/BFSTM) for high-voltage applications where metal chips and conductive fines could result in breakdown or arcing.



PEM® brand self-clinching blind fasteners provide permanently mounted blind threads in metal sheets as thin as .040"/1 mm.

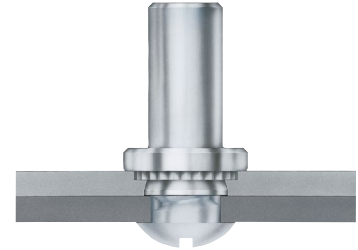
PEM® blind fasteners employ the proven PEM® self-clinching design and are easily installed into properly sized holes. Shanks of PEM® fasteners act as their own pilots. PEM® blind fasteners can be installed with any standard press applying squeezing forces between parallel surfaces.

The closed end design provides additional protection where it matters:

- Sealed threads – guard against foreign matter and contamination
- Screw penetration control – limits depth to protect sensitive components
- Permanently mounted – no backing nut or secondary operations needed
- Available in steel and 300 series stainless steel
- Available on special order with free-running locking thread feature.

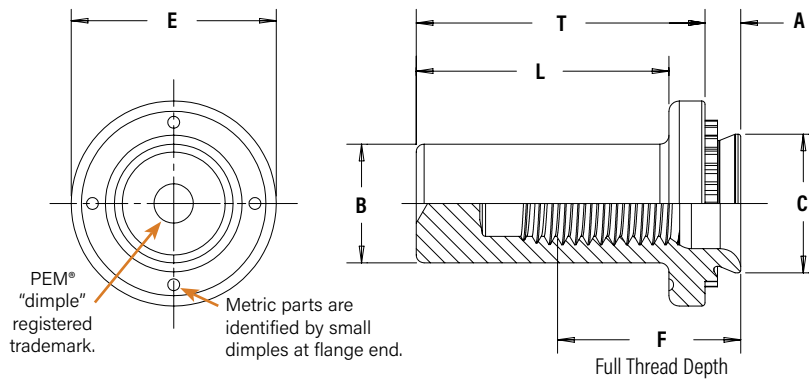
Our **new fine finish BF™ and BFS™** self clinching blind nuts are engineered specifically for better performance in soft copper and aluminum busbar applications without fear of chips or fines. The larger flange design provides greater bearing surface – delivering secure thread retention without damaging or deforming the panel during installation.

Fastener drawings and models are available at www.pemnet.com. Custom sizes are available on special order. [Contact us](#) for more information.



Fine Finish BF™ and BFS™ Blind Nuts - NEW

- Designed for sensitive applications where metal chips cannot be tolerated
- Oversized mounting holes to provide better performance in soft material
- Large flange design provides greater bearing surface



Part Number Designation

BF	-	M3	-	2	ZI
BF	S	M3	-	2	
↓	↓	↓	↓	↓	↓
Type (Blind Nut Fine Finish)	Material Code	Thread Size Code	Shank Code	Finish	

All dimensions are in millimeters.

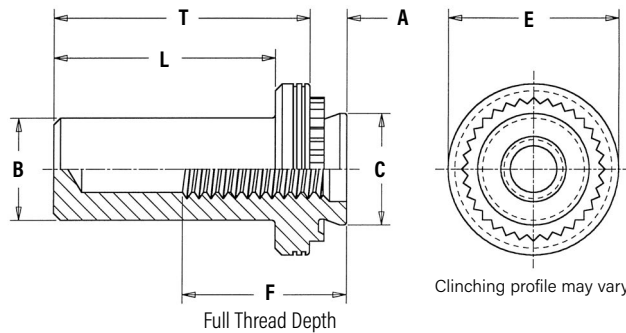
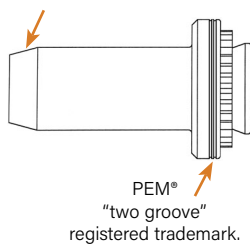
Metric	Thread Size x Pitch	Type		Thread Code (1)	Shank Code	A (Shank) Max	Min. Sheet Thickness	Hole Size in Sheet +0.08	B Max.	C Max.	E ± 0.25	F Min.	L Max.	T ± 0.25	Min. Dist. Hole C/L to Edge (2)
		Fastener Material													
		Steel	Stainless Steel												
	M3 x 0.5	BF	BFS	M3	1	0.97	1	5.41	4.6	5.38	7.95	7	9.8	11.2	6.9
					2	1.38	1.4								
	M4 x 0.7	BF	BFS	M4	1	0.97	1	6.35	5.5	6.33	8.75	8	11	12.5	7.1
					2	1.38	1.4								
	M5 x 0.8	BF	BFS	M5	1	0.97	1	8.75	7.6	8.73	11.1	10	14	16	8.6
					2	1.38	1.4								
	M6 x 1	BF	BFS	M6	1	1.38	1.4	10.5	9.1	10.47	14	11.5	15.8	18.3	9.7
2					2.21	2.29									
M8 x 1.25	BF	BFS	M8	2	2.21	2.29	12.7	11.7	12.67	16.35	13.5	19	22	13.5	

(1) PEM® BF™ and BFS™ nuts are available on special order with a free-running locking thread feature allowing mating screw to turn freely until clamp load is applied. For more information, contact PEM® [Technical Support](#).

(2) For more information on proximity to bends and distance to other clinch hardware, see [PEM® Tech Sheet C/L To Edge](#).

B™ and BS™ Blind Nuts

Metric parts are identified by large chamfer at blind end.



Part Number Designation

B	-	832	-	2	ZI
B	-	832	-	2	
Type		Material Code		Thread Size Code	Shank Code
					Finish

All dimensions are in inches.

Unified	Thread Size	Type		Thread Code (1)	Shank Code	A (Shank) Max	Min. Sheet Thickness	Hole Size in Sheet +.003 -.000	B Max.	C Max.	E ± .010	F Min.	L Max.	T ±.010	Min. Dist. Hole C/L to Edge (2)
		Fastener Material													
		Steel	Stainless Steel												
	.112-40 (#4-40)	B	BS	440	1	.038	.040	.166	.150	.165	.250	.210	.335	.380	.19
					2	.054	.056								
	.138-32 (#6-32)	B	BS	632	1	.038	.040	.1875	.169	.187	.280	.230	.335	.380	.22
					2	.054	.056								
	.164-32 (#8-32)	B	BS	832	1	.038	.040	.213	.204	.212	.310	.280	.385	.440	.27
					2	.054	.056								
	.190-32 (#10-32)	B	BS	032	1	.038	.040	.250	.235	.249	.340	.280	.385	.440	.28
2					.054	.056									
.250-20 (1/4-20)	B	BS	0420	1	.054	.056	.344	.305	.343	.430	.310	.500	.560	.34	
				2	.087	.090									

All dimensions are in millimeters.

Metric	Thread Size x Pitch	Type		Thread Code (1)	Shank Code	A (Shank) Max	Min. Sheet Thickness	Hole Size in Sheet +0.08	B Max.	C Max.	E ± 0.25	F Min.	L Max.	T ± 0.25	Min. Dist. Hole C/L to Edge (2)
		Fastener Material													
		Steel	Stainless Steel												
	M3 x 0.5	B	BS	M3	1	0.97	1	4.22	3.84	4.2	6.35	5.3	8.5	9.6	4.8
					2	1.38	1.4								
	M4 x 0.7	B	BS	M4	1	0.97	1	5.41	5.2	5.38	7.95	7.1	9.8	11.2	6.9
					2	1.38	1.4								
	M5 x 0.8	B	BS	M5	1	0.97	1	6.35	6.02	6.33	8.75	7.1	9.8	11.2	7.1
					2	1.38	1.4								
	M6 x 1	B	BS	M6	1	1.38	1.4	8.75	7.8	8.73	11.1	7.8	12.7	14.3	8.6
2					2.21	2.29									

(1) PEM® B™ and BS™ nuts are available on special order with a free-running locking thread feature allowing mating screw to turn freely until clamp load is applied. For more information, contact PEM® [Technical Support](#).

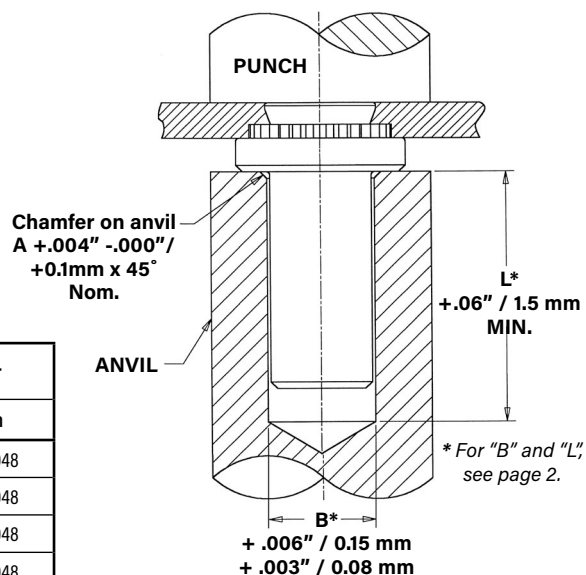
(2) For more information on proximity to bends and distance to other clinch hardware, see [PEM® Tech Sheet C/L To Edge](#).

Installation

1. Prepare properly sized mounting hole in the sheet. Do not perform any secondary operations such as deburring.
2. Place the barrel of the fastener into the anvil hole and place the mounting hole (preferably the punch side) over the shank of the fastener.
3. With the installation punch and anvil surfaces parallel, apply squeezing force until the flange contacts the mounting sheet. The sketches indicate suggested tooling for applying these forces.

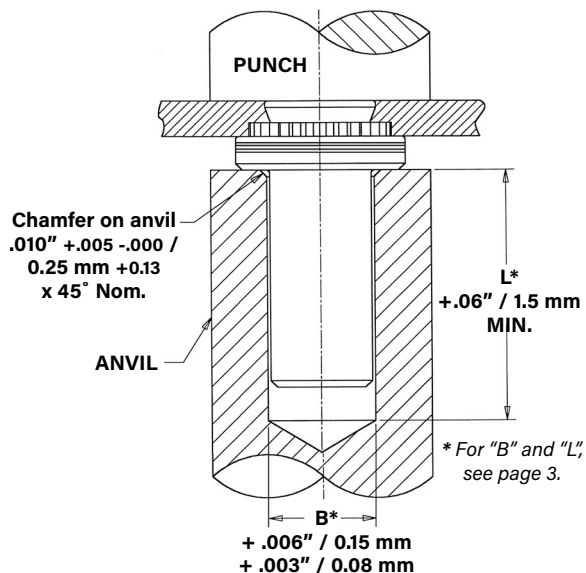
Installation Tooling - BF™ and BFS™ Blind Nuts

Thread Code	Anvil Dimensions (mm)	HAEGER® Part Number		PEMSERTER® Part Number	
	A (+0.1)	Anvil	Punch	Anvil	Punch
M3	4.67	H-237-440L	H-103-00L	8027364	975200048
M4	5.59	H-237-832L	H-103-00L	8027366	975200048
M5	7.67	H-237-1032L	H-103-00L	8027367	975200048
M6	9.17	H-237-0420L	H-103-062L	8027368	975200048
M8	11.79	H-237-0518L	H-103-062L	8027369	975200048



Installation Tooling - B™ and BS™ Blind Nuts

Thread Code	HAEGER® Part Number		PEMSERTER® Part Number	
	Anvil	Punch	Anvil	Punch
440 & M3	H-137-440L	H-108-0020L	975200001	975200048
632	H-137-632L	H-108-0020L	975200002	975200048
832 & M4	H-137-832L	H-108-0020L	975200003	975200048
032 & M5	H-137-1032L	H-108-0020L	975200004	975200048
0420 & M6	H-137-0420L	H-108-0020L	975200005	975200048



Installation Notes

- For best results we recommend using a HAEGER® or PEMSERTER® machine for installation of PEM® self-clinching fasteners. See our [website](#) for more information.
- Visit the [Animation Library](#) on our website to view the installation process.



For Additional HAEGER® and PEMSERTER® Tooling Information/Part Numbers visit our [tooling wizard](#)



Material and Finish Specifications

	Threads	Fastener Materials		Standard Finishes		For Use in Sheet Hardness: (2)	
Type	Internal, ASME B1.1, 2B / ASME B1.13M, 6H	Hardened Carbon Steel	300 Series Stainless Steel	Passivated and/or Tested per ASTM A380	Zinc Plated per ASTM B633, SCl (5µm), Type III, Colorless (1)	HRB 80 / HB 150 or less	HRB 70 / HB 125 or less
BF	▪	▪			▪	▪	
BFS	▪		▪	▪			▪
B	▪	▪			▪	▪	
BS	▪		▪	▪			▪
Part Number Code for Finishes				None	ZI		

(1) See PEM [Technical Support](#) section of our web site for related plating standards and specifications.

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

Types BF™ and BFS™ Performance Data ⁽¹⁾

Metric	Thread Code	Shank Code	Sheet Thickness (mm)	Test Sheet Material					
				5052-H34 Aluminum			Cold-Rolled Steel		
				Installation (kN)	Pushout (N)	Torque-out (N-m) ⁽²⁾	Installation (kN)	Pushout (N)	Torque-out (N-m) ⁽²⁾
	M3	1	1	8.9	470	1.13	12	645	1.7
		2	1.5	10	970	1.47	12	1250	2.03
	M4	1	1	10	480	2.6	12	800	4
		2	1.5	12	845	4	20	1420	5.1
	M5	1	1	10	750	3.6	18	900	4.5
		2	1.5	15.2	1580	5.7	24.5	1760	6.8
	M6	1	1.5	17.8	1570	10.2	24.5	1870	17
		2	2.5	24	1570	14.1	31	1870	17
	M8	2	2.5	26	1760	18.1	34	2020	20.3

(1) Published installation forces are for general reference. Actual set-up and confirmation of complete installation should be made by observing proper seating of fastener as described in the installation steps. Other performance values reported are averages when all proper installation parameters and procedures are followed. Variations in mounting hole size, sheet material, and installation procedure may affect performance. Performance testing this product in your application is recommended. We will be happy to provide technical assistance and/or samples for this purpose.

(2) Torque-out performance will depend on the strength and type of screw being used. In most cases, the screw threads will fail before the insert threads.

Types B™ and BS™ Performance Data⁽¹⁾

Unified	Thread Code	Shank Code	Sheet Thickness (in.)	Test Sheet Material					
				5052-H34 Aluminum			Cold-Rolled Steel		
				Install. (lbs.)	Pushout (lbs.)	Torque-out (in. lbs.)	Install. (lbs.)	Pushout (lbs.)	Torque-out (in. lbs.)
440	1	1	.040	1600	90	10	2500	125	13
	2	2	.056	2000	170	13	3500	230	18
632	1	1	.040	1800	95	17	3000	130	18
	2	2	.056	2800	190	22	4000	260	28
832	1	1	.040	2000	105	23	3500	135	30
	2	2	.056	3000	220	35	5000	285	45
032	1	1	.040	2100	110	32	4000	140	35
	2	2	.056	3500	190	50	5000	250	60
0420	1	1	.056	4000	315	90	6000	400	105
	2	2	.090						

Metric	Thread Code	Shank Code	Sheet Thickness (mm)	Test Sheet Material					
				5052-H34 Aluminum			Cold-Rolled Steel		
				Install. (kN)	Pushout (N)	Torque-out (N-m)	Install. (kN)	Pushout (N)	Torque-out (N-m)
M3	1	1	1	71	400	1.15	11.1	550	1.5
	2	2	1.4	9	750	1.47	14	1010	2.05
M4	1	1	1	8.9	470	2.6	15.6	600	3.4
	2	2	1.4	12.5	970	4	20	1250	5.1
M5	1	1	1	9.3	480	3.6	17.8	620	4
	2	2	1.4	14	845	5.7	25	1112	6.8
M6	1	1	1.4	17.8	1400	10.2	27.7	1760	11.9
	2	2	2.3						

(1) Published installation forces are for general reference. Actual set-up and confirmation of complete installation should be made by observing proper seating of fastener as described in the installation steps. Other performance values reported are averages when all proper installation parameters and procedures are followed. Variations in mounting hole size, sheet material, and installation procedure may affect performance. Performance testing this product in your application is recommended. We will be happy to provide technical assistance and/or samples for this purpose.

PEM® "Two Groove"
(Registered Trademark)
Types B™ and BS™



PEM® "dimple"
(Registered Trademark)
Types BF™ and BFS™



Custom sizes are available on special order.
[Contact us](#) for more information.

All PEM® products meet our stringent quality standards. If you require additional industry or other specific [quality certifications](#), special procedures and/or part numbers are required. Please contact your local sales office or representative for further information.

Regulatory [compliance information](#) is available in Technical Support section of our website. Specifications subject to change without notice. See our website for the most current version of this bulletin.



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