



NA/NAL

Self-Clinching Floating Nuts

FEATURES

- Internal floating nut feature allows up to .030" (0.76mm) lateral adjustment to compensate for misalignment with mating fastener.
- Permanent installation in aluminum, carbon steel and stainless steel sheets.
- Self-locking version provides uniformity of locking torque equivalent to NASM25027 specifications (as applicable).
- Choice of RoHS-compliant materials and finishes.

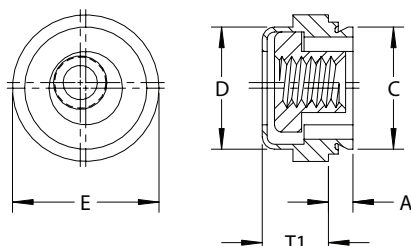


PART DESCRIPTION EXAMPLE

NASS	—	832	—	.038	—	P
Series Code		Thread Code		Shank Length		Finish Code

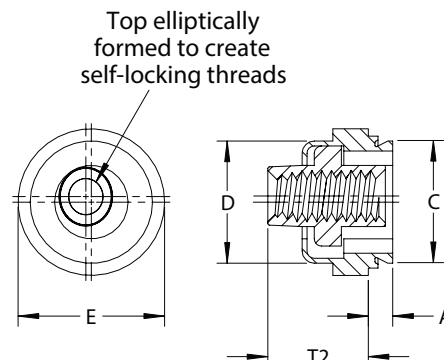


The double dart design is a registered PENCOM trademark



NON-LOCKING
Series Code NA

.030" (0.76mm) min.
total lateral float in
all directions



SELF-LOCKING
Series Code NAL

NA/NAL Self-Clinching Floating Nuts

GENERAL

All dimensions in inches

INCH	Thread ¹	Thread Code	Sheet			A Shank Length Max.	C Max.	D Max.	E ±.015	T1 Max.	T2 Max.
			Minimum Thickness	Hole Size +.003 -.000	Minimum Distance Hole Center to Edge						
	2-56 ²	256	.038	.290	.30	.038	.289	.290	.360	.130	.190
			.054			.054					
	4-40	440	.038	.290	.30	.038	.289	.290	.360	.130	.190
			.054			.054					
	6-32	632	.038	.328	.32	.038	.327	.335	.390	.130	.200
			.054			.054					
	8-32	832	.038	.368	.34	.038	.367	.365	.440	.130	.210
			.054			.054					
	10-24	1024	.038	.406	.36	.038	.405	.405	.470	.170	.270
			.054			.054					
	10-32	1032	.038	.406	.36	.038	.405	.405	.470	.170	.270
			.054			.054					
	1/4-20	2520	.054	.515	.42	.054	.514	.510	.600	.210	.310
	1/4-28	2528	.054	.515	.42	.054	.514	.510	.600	.210	.310

(1) NA and NAL-series internal threads comply with ANSI B1.1 2B and 3B thread specifications, respectively.

(2) NAL not available with 2-56 threads.

All dimensions in millimeters

METRIC	Thread ¹	Thread Code	Sheet			A Shank Length Max.	C Max.	D Max.	E ±0.38	T1 Max.	T2 Max.
			Minimum Thickness	Hole Size +0.08 -0.00	Minimum Distance Hole Center to Edge						
	M2 x 0.4 ²	M2	0.97	7.37	7.62	0.97	7.35	7.37	9.14	3.31	4.83
			1.38			1.38					
	M2.5 x 0.45 ²	M2.5	0.97	7.37	7.62	0.97	7.35	7.37	9.14	3.31	4.83
			1.38			1.38					
	M3 x 0.5	M3	0.97	7.37	7.62	0.97	7.35	7.37	9.14	3.31	4.83
			1.38			1.38					
	M3.5 x 0.6	M3.5	0.97	8.33	8.13	0.97	8.31	8.51	9.91	3.31	5.10
			1.38			1.38					
	M4 x 0.7	M4	0.97	9.35	8.64	0.97	9.33	9.28	11.18	3.31	5.34
			1.38			1.38					
	M5 x 0.8	M5	0.97	10.31	9.14	0.97	10.29	10.29	11.94	4.32	6.86
			1.38			1.38					
	M6 x 1.0	M6	1.38	13.08	10.67	1.38	13.06	12.96	15.24	5.34	7.88

(1) NA and NAL-series internal threads comply with ASME B1.13M, 6H thread specifications.

(2) NAL not available with M2 or M2.5 threads.

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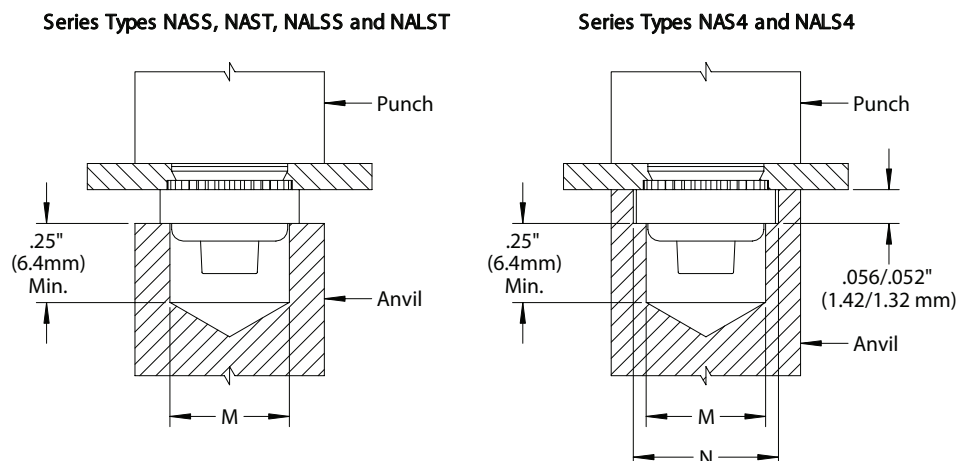
MATERIAL & FINISH

Material Code	Finish Code	Retainer		Nut		For Use in Sheet Hardness	
		Material Description	Finish Description	Material Description	Finish Description	HRB 70 Max.	HRB 88 Max.
NA Non-locking							
ST	Z	Heat Treated Carbon Steel	Zinc (SC1) with Type III Clear Chromate per ASTM B633	Carbon Steel	Zinc (SC1) with Type III Clear Chromate per ASTM B633	•	
SS	P	300-Series Stainless Steel	Passivated and/or Tested per ASTM A967	300-Series Stainless Steel	Passivated and/or Tested per ASTM A967	•	
S4 ¹	P	400-Series Stainless Steel	Passivated and/or Tested per ASTM A967	300-Series Stainless Steel	Passivated and/or Tested per ASTM A967		•
NAL Locking							
ST	DF	Heat Treated Carbon Steel	Zinc (SC1) with Type III Clear Chromate per ASTM B633	300-Series Stainless Steel	Black Dry-film Lubricant	•	
SS	DF	300-Series Stainless Steel	Passivated and/or Tested per ASTM A967	300-Series Stainless Steel	Black Dry-film Lubricant	•	
S4 ¹	DF	400-Series Stainless Steel	Passivated and/or Tested per ASTM A967	300-Series Stainless Steel	Black Dry-film Lubricant		•

(1) Not available in 2-56, 4-40, 6-32, 8-32, 10-24 and 10-32 thread sizes with .054" shank length; M2, M2.5, M3, M4 and M5 thread sizes with 1.38mm shank length; and 1/4-20, 1/4-28 and M6 thread sizes.

INSTALLATION

1. Punch or drill hole in sheet. Do not deburr edges.
2. Insert fastener in recessed anvil and locate sheet hole over the retainer shank.
3. Squeeze the fastener and sheet between parallel punch and anvil surfaces.
Use only enough pressure to seat the retainer shoulder flush with the sheet.
Punch and anvil should be made from hardened steel.



(Shown Installed in Sheets)

ANVIL DIMENSIONS

INCH	Thread Code	M +.005 +.002	N +.005 +.002
	256, 440	.290	.375
	632	.335	.405
	832	.365	.455
	1024, 1032	.405	.485
	2520, 2528	.510	.615

All dimensions in inches

METRIC	Thread Code	M +0.13 +0.05	N +0.13 +0.05
	M2, M2.5, M3	7.37	9.52
	M3.5	8.51	10.29
	M4	9.28	11.56
	M5	10.29	12.32
	M6	12.96	15.62

All dimensions in millimeters

PERFORMANCE - MATERIAL CODES ST & SS

INCH	Thread Code	Retainer Shank Length	Sheet Material					
			5052-H34 Aluminum			Cold-Rolled Steel		
			Installation (lbs)	Retainer Push-out (lbs)	Retainer Torque-out (in-lbs)	Installation (lbs)	Retainer Push-out (lbs)	Retainer Torque-out (in-lbs)
	256 440	.038	1280-1720	185-245	55-75	2550-3450	255-345	72-100
		.054	1700-2300	190-260	68-92	2550-3450	255-345	130-175
	632	.038	1700-2300	205-275	120-160	2550-3450	255-345	130-175
		.054	1700-2300	215-290	130-175	2550-3450	255-345	150-200
	832	.038	1700-2300	215-290	120-160	2550-3450	255-345	130-175
		.054	1700-2300	225-305	130-175	2550-3450	340-460	170-230
	1024 1032	.038	1700-2300	255-345	130-175	2980-4020	340-460	130-175
		.054	1700-2300	300-400	150-200	2980-4020	385-520	170-230
	2520 2528	.054	2550-3450	340-460	170-230	4250-5750	425-575	275-375

(1) Performance data are shown in ranges and should be used for general comparative purposes only as actual results may be affected by variations in installation and panel preparation equipment and procedures; and panel hardness, hole size, material and thickness. PENCOM strongly recommends testing in each application to determine actual loads.

PERFORMANCE - MATERIAL CODES ST & SS (CONTINUED)

METRIC	Thread Code	Retainer Shank Length	Sheet Material					
			5052-H34 Aluminum			Cold-Rolled Steel		
			Installation (kN)	Retainer Push-out (N)	Retainer Torque-out (N-m)	Installation (kN)	Retainer Push-out (N)	Retainer Torque-out (N-m)
	M2/M2.5 M3	0.97	5.7-7.7	815-1100	6.2-8.4	11.3-15.3	1130-1530	8.2-11
		1.38	7.6-10.2	850-1150	7.6-10	11.3-15.3	1130-1530	14-19
	M3.5	0.97	7.6-10.2	910-1225	13-18	11.3-15.3	1130-1530	14-19
		1.38	7.6-10.2	945-1280	14-19	11.3-15.3	1130-1530	17-23
	M4	0.97	7.6-10.2	945-1280	13-18	11.3-15.3	1130-1530	14-19
		1.38	7.6-10.2	1000-1350	14-19	11.3-15.3	1510-2050	19-26
	M5	0.97	7.6-10.2	1130-1530	14-19	13.3-17.9	1510-2050	14-19
		1.38	7.6-10.2	1320-1790	17-23	13.3-17.9	1700-2300	19-26
	M6	1.38	11.3-15.3	1510-2050	31-42	18.9-25.5	1890-2560	31-42

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PERFORMANCE - MATERIAL CODE S4

INCH	Thread Code	Test Sheet Material		
		300-Series Stainless Steel		
		Installation (lbs)	Retainer Push-out (lbs)	Retainer Torque-out (in-lbs)
	256/440	7650-10400	170-230	72-100
	632	8500-11500	170-230	72-100
	832	10200-13800	170-230	72-100
	1024/1032	11100-14900	215-290	105-145

- (1) Performance data are shown in ranges and should be used for general comparative purposes only as actual results may be affected by variations in installation and panel preparation equipment and procedures; and panel hardness, hole size, material and thickness. PENCOM strongly recommends testing in each application to determine actual loads.

METRIC	Thread Code	Test Sheet Material		
		300-Series Stainless Steel		
		Installation (kN)	Retainer Push-out (N)	Retainer Torque-out (N-m)
	M2/M2.5/M3	34-46	755-1020	8.2-11
	M3.5	38-51	755-1020	8.2-11
	M4	45-61	755-1020	8.2-11
	M5	48-66	935-1270	12-16

- (1) Performance data are shown in ranges and should be used for general comparative purposes only as actual results may be affected by variations in installation and panel preparation equipment and procedures; and panel hardness, hole size, material and thickness. PENCOM strongly recommends testing in each application to determine actual loads.