

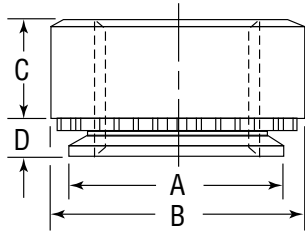


Self-Clinching Nuts

Series C & CS



C & CS nuts provide strong load-bearing threads in sheet metal and other thin section assemblies. Some C & CS nuts meet specification features of NASM45938/1.



Series	Material	Finish
C	Heat-treated Carbon Steel	Zinc* Clear
CS	300 Series Stainless Steel	Passivated ASTM A380

*See Finish Spec. on Page 6.

Thread: Internal 2B, ANSI B1.1
(6H, ANSI/ASME B1.13M).

Use In: C – Materials with HRB-80 or less.
CS – Materials with HRB-70 or less.

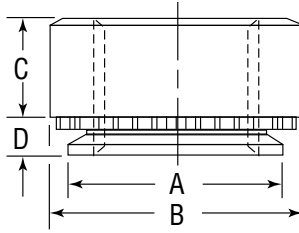
Dimensions & Specifications

Thread Size	Part Number		D Max.	Min.	+.003 in. -.000	A Max.	B ± .01 in.	C ± .01 in.	Min.
	Carbon Steel	Stainless Steel							
#2-56	C256-0	CS256-0	.030	.030	.166	.165	.250	.070	.19
	C256-1	CS256-1	.038	.040					
	C256-2	CS256-2	.054	.056					
	C256-3	CS256-3	.087	.091					
#3-48	C348-0	CS348-0	.030	.030	.166	.165	.250	.070	.19
	C348-1	CS348-1	.038	.040					
	C348-2	CS348-2	.054	.056					
	C348-3	CS348-3	.087	.091					
#4-40	C440-0	CS440-0	.030	.030	.166	.165	.250	.070	.19
	C440-1	CS440-1	.038	.040					
	C440-2	CS440-2	.054	.056					
	C440-3	CS440-3	.087	.091					
#6-32	C632-0	CS632-0	.030	.030	.1875	.187	.281	.070	.22
	C632-1	CS632-1	.038	.040					
	C632-2	CS632-2	.054	.056					
	C632-3	CS632-3	.087	.091					
#8-32	C832-0	CS832-0	.030	.030	.213	.212	.312	.090	.27
	C832-1	CS832-1	.038	.040					
	C832-2	CS832-2	.054	.056					
	C832-3	CS832-3	.087	.091					



Self-Clinching Nuts

Series C & CS



Continued from previous page.

Dimensions & Specifications

Thread Size	Part Number		D Max.	Min.	+ .003 in. - .000	A Max.	B ± .01 in.	C ± .01 in.	Min.
	Carbon Steel	Stainless Steel							
#10-24	C1024-0	CS1024-0	.030	.030	.250	.249	.344	.090	.28
	C1024-1	CS1024-1	.038	.040					
	C1024-2	CS1024-2	.054	.056					
	C1024-3	CS1024-3	.087	.091					
#10-32	C1032-0	CS1032-0	.030	.030	.250	.249	.344	.090	.28
	C1032-1	CS1032-1	.038	.040					
	C1032-2	CS1032-2	.054	.056					
	C1032-3	CS1032-3	.087	.091					
#12-24	C1224-1	CS1224-1	.038	.040	.277	.276	.380	.130	.31
	C1224-2	CS1224-2	.054	.056					
	C1224-3	CS1224-3	.087	.091					
1/4-20	C420-0	CS420-0	.045	.047	.344	.343	.440	.170	.34
	C420-1	CS420-1	.054	.056					
	C420-2	CS420-2	.087	.091					
	C420-3	CS420-3	.120	.125					
1/4-28	C428-1	CS428-1	.054	.056	.344	.343	.437	.170	.34
	C428-2	CS428-2	.087	.091					
	C428-3	CS428-3	.120	.125					
5/16-18	C518-1	CS518-1	.054	.056	.413	.412	.500	.230	.38
	C518-2	CS518-2	.087	.091					
	C518-3	CS518-3	.120	.125					
5/16-24	C524-1	CS524-1	.054	.056	.413	.412	.500	.230	.38
	C524-2	CS524-2	.087	.091					
	C524-3	CS524-3	.120	.125					
3/8-16	C616-1	CS616-1	.087	.091	.500	.499	.562	.270	.44
	C616-2	CS616-2	.120	.125					
	C616-3	CS616-3	.235	.250					
3/8-24	C624-1	CS624-1	.087	.091	.500	.499	.562	.270	.44
	C624-2	CS624-2	.120	.125					
	C624-3	CS624-3	.235	.250					
1/2-13	C813-1	CS813-1	.120	.125	.656	.655	.810	.360	.63
	C813-2	CS813-2	.235	.250					

INCH (in.)



Self-Clinching Nuts

Series C & CS



Continued from previous page.

Dimensions & Specifications

Thread Size	Part Number		D Max.	Min.	+0.08 mm -0.00	A Max.	B ± .25 mm	C ± .25 mm	Min.
	Carbon Steel	Stainless Steel							
M2 x 0.4	CM2-0	CSM2-0	.76	.8	4.22	4.20	6.3	1.5	4.8
	CM2-1	CSM2-1	.97	1.0					
	CM2-2	CSM2-2	1.37	1.4					
	CM2-3	CSM2-3	2.21	2.3					
M2.5 x 0.45	CM2.5-0	CSM2.5-0	.76	.8	4.22	4.20	6.3	1.5	4.8
	CM2.5-1	CSM2.5-1	.97	1.0					
	CM2.5-2	CSM2.5-2	1.37	1.4					
	CM2.5-3	CSM2.5-3	2.21	2.3					
M3 x 0.5	CM3-0	CSM3-0	.76	.8	4.22	4.20	6.3	1.5	4.8
	CM3-1	CSM3-1	.97	1.0					
	CM3-2	CSM3-2	1.37	1.4					
	CM3-3	CSM3-3	2.21	2.3					
M3.5 x 0.6	CM3.5-0	CSM3.5-0	.76	.8	4.75	4.73	7.1	1.5	5.6
	CM3.5-1	CSM3.5-1	.97	1.0					
	CM3.5-2	CSM3.5-2	1.37	1.4					
	CM3.5-3	CSM3.5-3	2.21	2.3					
M4 x 0.7	CM4-0	CSM4-0	.76	.8	5.41	5.38	7.9	2.0	6.9
	CM4-1	CSM4-1	.97	1.0					
	CM4-2	CSM4-2	1.37	1.4					
	CM4-3	CSM4-3	2.21	2.3					
M5 x 0.8	CM5-0	CSM5-0	.76	.8	6.35	6.33	8.7	2.0	7.1
	CM5-1	CSM5-1	.97	1.0					
	CM5-2	CSM5-2	1.37	1.4					
	CM5-3	CSM5-3	2.21	2.3					
M6 x 1.0	CM6-0	CSM6-0	1.15	1.2	8.75	8.73	11.05	4.08	8.6
	CM6-1	CSM6-1	1.37	1.4					
	CM6-2	CSM6-2	2.21	2.3					
	CM6-3 [†]	CSM6-3	3.05	3.2					
M8 x 1.25	CM8-1	CSM8-1	1.37	1.4	10.5	10.47	12.65	5.47	9.7
	CM8-2	CSM8-2	2.21	2.3					
	CM8-3 [†]	CSM8-3	3.05	3.2					
M10 x 1.5	CM10-1	CSM10-1	2.21	2.3	14.0	13.97	17.35	7.48	13.5
	CM10-2	CSM10-2	3.05	3.2					
	CM10-3 [†]	CSM10-3 [†]	6.00	6.4					
M12 x 1.75	CM12-1 [†]	CSM12-1 [†]	3.05	3.2	17.0	16.95	20.55	8.5	16
	CM12-2 [†]	CSM12-2 [†]	6.00	6.4					

[†]Not stocked, available upon special order.

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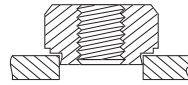


Self-Clinching Nuts

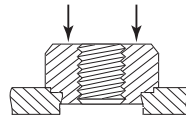
Series C & CS



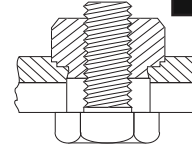
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Fastener Must Be Installed
Squarley In Hole



Squeezing Force Is Applied
To Head Of Fastener



Install Bolt Or Screw
From Opposite Side
Of Head Of Fastener

Installation & Performance Data

Thread Size	Shank Code	Cold-rolled Steel			5052-H34 Aluminum		
		Installation Force (tons)	Pushout (lbs.)	Torque-out (in.-lbs.)	Installation Force (tons)	Pushout (lbs.)	Torque-out (in.-lbs.)
#2-56	-0	1 - 2	100	13	0.5 - 1	60	8
	-1		120	14		89	9.5
	-2		225	17		169	12
#3-48	-3	1.5 - 3	225	18	1 - 2	169	12
	-1		105	15		60	16
#4-40	-2	2 - 3	125	19	1 - 2	90	17
	-1		270	27		185	21
	-3		270	27		185	21
#6-32	-0	2 - 3	105	25	1 - 2	65	21
	-1		140	34		100	23
	-2		280	44		215	32
#8-32	-3	2 - 3.5	280	44	1 - 2	215	32
	-0		115	31		65	25
	-1		175	39		105	31
#10-24	-2	3 - 4	245	59	2 - 3.25	245	49
	-1		195	73		115	62
	-3		345	79		280	69
#10-32	-3	3 - 4	345	79	2 - 3.5	280	69
	-0		310	110		215	65
#12-24	-1	3 - 4	310	145	2 - 3.5	355	85
	-2		395	145		355	120
1/4-20	-1	3 - 4	420	160	2 - 3.5	375	115
	-2		420	175		375	155
1/4-28	-1	3.5 - 5.5	420	175	2.5 - 4	375	115
	-2		420	175		375	155
5/16-18	-1	5 - 7.5	420	175	7 - 9	470	345
	-2		420	175		470	345
5/16-24	-1	5 - 7.5	420	175	7 - 9	470	345
	-2		420	175		470	345
3/8-16	-1	5 - 7.5	420	175	7 - 9	470	345
	-2		420	175		470	345
3/8-24	-1	5 - 7.5	420	175	7 - 9	470	345
	-2		420	175		470	345
1/2-13	-1	5 - 7.5	1040	730	7 - 9	470	345

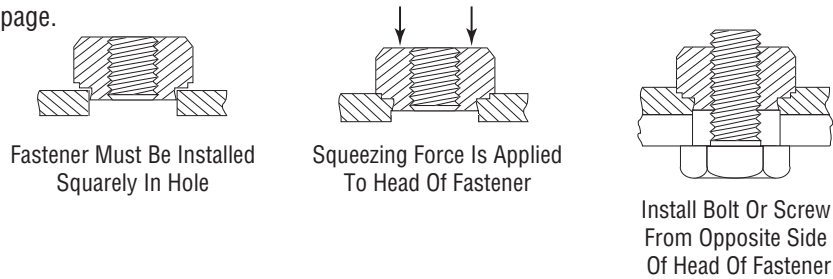


Self-Clinching Nuts

Series C & CS



Continued from previous page.



Installation & Performance Data

Thread Size	Shank Code	Cold-rolled Steel			5052-H34 Aluminum				
		Installation Force (kN)	Pushout (N)	Torque-out (N•m)	Installation Force (kN)	Pushout (N)	Torque-out (N•m)		
M2	-0	11.2-15.6	465	1.4	6.7-8.9	275	.9		
M2.5	-1		545	1.7		390	1.1		
M3	-2		1010	2.0		745	1.4		
M3.5	-3	13.4-26.7	1100	2.0	11.2-13.4	850	1.4		
	-0		475	1.8		290	1.8		
	-1		565	1.8		465	1.9		
-2	1200		2.3	965		2.5			
M4	-3	18-27	1300	2.5	11.2-13.4	1050	2.8		
	-0		485	2.9		290	2.3		
	-1		640	2.95		465	2.6		
-2	1245		4.2	965		4.0			
-3	1300		4.2	1100		4.0			
M5	-0	18-31	525	3.6	11.2-15.6	290	3.0		
	-1		790	3.6		475	3.6		
	-2		1400	6.0		1180	4.7		
-3	1500		6.0	1225		5.7			
M6	-0		27-36	1375		12.8	18-32	965	7.7
	-1-2-3			1755		16.4		1570	9.6
M8	-1-2-3	27-36		1860	18.1	18-32		1560	13.0
M10	-1-2-3	32-50	2000	36.2	22-36	1750	32.7		
M12	-1-2	33-49	3080	75	23-30	1400	36		

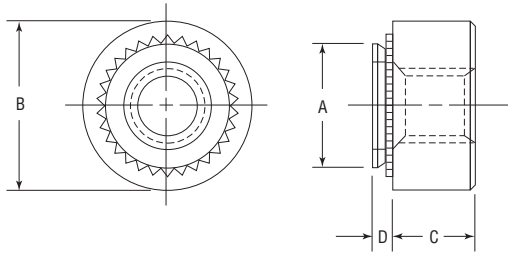


Self-Clinching Nuts

Series CFH & CFHN



CFH nut fasteners are available in both heat-treated and non-heat-treated versions, offering an opportunity to up-grade fastening quality with appreciable cost reduction over weld nuts.

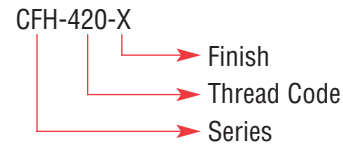


Series	Material	Finish
CFH-X	Heat-treated	None
CFH-ZI	Carbon Steel	Zinc* Clear
CFHN-X	Non-Heat-treated	None
CFHN-ZI	Carbon Steel	Zinc* Clear

*See Finish Spec. on Page 6.

Thread: Internal 2B, ANSI B1.1 (6H, ANSI/ASME B1.13M).
 Use in: CFH-materials with Rockwell Hardness of B-80 or less.
 CFHN -materials with Rockwell Hardness of B-60 or less.

Part Number Structure:



Dimensions & Specifications

	Thread Size	Part Number		D Max.	Min.	+ .005 in. (.13mm) - .000(.00)	A Max.	B ±.01 in. (±.25 mm)	C ±.005 in. (±.13 mm)	Min.
		Heat Treated	Non-Heat Treated							
INCH	1/4-20	CFH420	CFHN420	.058	.058	.344	.343	.500	.189	.34
METRIC	M6 x 1.0	CFHM6	CFHNM6	1.48	1.48	8.75	8.72	12.8	5.0	10.0

Installation & Performance Data

	Material	Panel Thickness	Installation Force	Pushout	Torque-out	
INCH	1/4-20	Cold-rolled Steel	.060 in.	4800 lbs.	450 lbs.	120 in.-lbs.
		Aluminum	.062 in.	3500 lbs.	370 lbs.	110 in.-lbs.
METRIC	M6	Cold-rolled Steel	2.24 mm	33 kN	2020 N	23.5 N•m
		Aluminum	2.29 mm	22 kN	1760 N	21.5 N•m

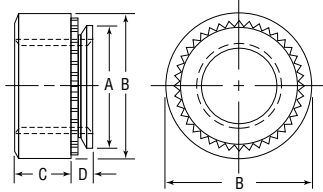


Self-Clinching Nuts

Series CA-Aluminum



CA aluminum self-clinching nuts provide strong load-bearing threads. All Captive Fastener self-clinching nuts fit standard hole sizes and are dimensionally identical to industry standards.



Series	Material	Finish
CA	2024-T4 Aluminum	None

Thread: Internal 2B, ANSI B1.1 (6H, ANSI/ASME B1.13M).
 Use in: Materials with Rockwell Hardness of B-50 or less.

Dimensions & Specifications

	Thread Size	Part Number	D Max.	Min.	+0.003 in. (+.08 mm) -0.000 (-.00)	A Max.	B ± .01 in. (± .25 mm)	C ± .01 in. (± .25 mm)	Min.
INCH (in.)	#2-56	CA256-1	.038	.040	.166	.165	.25	.07	.19
		CA256-2	.054	.056					
	#4-40	CA440-1	.038	.040	.1875	.187	.25	.09	.22
		CA440-2	.054	.056					
	#6-32	CA632-1	.038	.040	.213	.212	.28	.09	.27
		CA632-2	.054	.056					
	#8-32	CA832-1	.038	.040	.234	.233	.31	.13	.28
		CA832-2	.054	.056					
	#10-24	CA1024-1	.038	.040	.296	.295	.38	.16	.31
		CA1024-2	.054	.056					
#10-32	CA1032-1	.038	.040	.296	.295	.38	.16	.31	
	CA1032-2	.054	.056						
1/4-20	CA420-1	.054	.056	.344	.343	.44	.17	.34	
	CA420-2	.087	.091						
	CA420-3	.120	.125						
METRIC (mm)	M2 x 0.4	CAM2-1	.97	1.0	4.22	4.2	6.3	1.5	4.8
		CAM2-2	1.37	1.4					
	M3 x 0.5	CAM3-1	.97	1.0	4.75	4.73	6.3	2.0	5.6
		CAM3-2	1.37	1.4					
	M3.5 x 0.6	CAM3.5-1	.97	1.0	5.41	5.38	7.1	2.0	6.9
		CAM3.5-2	1.37	1.4					
	M4 x 0.7	CAM4-1	.97	1.0	6.0	5.97	7.9	3.0	7.1
		CAM4-2	1.37	1.4					
	M5 x 0.8	CAM5-1	.97	1.0	7.5	7.47	9.5	3.8	7.9
		CAM5-2	1.37	1.4					
	M6 x 1.0	CAM6-1	1.37	1.4	8.75	8.73	11.1	4.1	8.6
		CAM6-2	2.21	2.3					



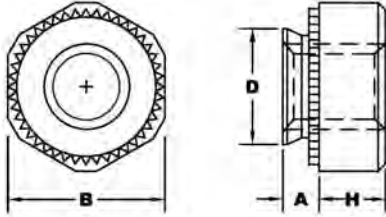
Self-Clinching Nuts

Series CKN



CKN self-clinching KAL-nuts provide strong internal threads in sheet material as thin as 1 mm.

Series	Material	Finish
CKN	Heat-treated Carbon Steel	Zinc* Clear



*See Finish Spec. on Page 6.

Thread: Internal 6H, ANSI/ASME B1.13.

Use in: CKN – Materials with Rockwell Hardness of HRB-80 or less.

Dimensions & Specifications

Thread Size	Part Number	D Max	B +.002 -.20	H ±.10	A Max.			
	Carbon Steel					Min.	+ .08 - .00	Min.
M3 x 0.5	CKNM3-1	4.45	5.5	2.0	1.0	1.0	4.5	4.5
	CKNM3-2							
M4 x 0.7	CKNM4-1	5.45	7.0	2.2	1.0	1.0	5.5	5.5
	CKNM4-2							
M5 x 0.8	CKNM5-1	6.45	8.0	3.0	1.0	1.0	6.5	6.5
	CKNM5-2							
M6 x 1.0	CKNM6-1	7.95	10.0	4.0	1.0	1.0	8.0	8.0
	CKNM6-2							
M8 x 1.25	CKNM8-2	9.95	13.0	4.5	1.4	1.4	10.0	10.0
	CKNM8-3							

Installation & Performance Data

Thread Size	Shank	Min. Sheet	Cold-rolled Steel			5052-H34 Aluminum		
			Installation Force (kN)	Pushout (N)	Torque-out (N•m)	Installation Force (kN)	Pushout (N)	Torque-out (N•m)
M3	-1	1.0	11.7	490	1.96	5.8	290	1.17
	-2	1.4	12.7	780	2.45	6.8	580	1.47
M4	-1	1.0	12.7	580	2.94	7.8	390	1.96
	-2	1.4	13.7	880	3.92	9.8	680	2.94
M5	-1	1.0	13.7	680	3.92	8.8	440	2.94
	-2	1.4	14.7	980	4.9	10.7	730	3.92
M6	-1	1.0	16.6	880	7.84	11.7	580	5.88
	-2	1.4	19.6	1270	11.76	13.7	880	7.84
M8	-2	1.0	24.5	1370	15.69	15.6	1070	9.80
	-3	1.4	29.4	1760	19.61	17.6	1370	11.76