

# Countersunk Socket Head Screws

## UNC/UNF

Inch



Controlled angle under the head ensures maximum flushness and side wall contact. Non-slip Hex socket prevents marring of material.

### Equivalent Standards

BS 2470, ANSI B18.3

### Mechanical Properties

Material: ASTM F835

Hardness: Rc 39–43

Tensile Strength: 96,000 lbf/in<sup>2</sup> min.

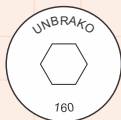
### Length Tolerance

Diameter	to 1"	over 1"	over 2 1/2"
		to 2 1/2"	to 6"
#0 to 3/8" incl.	-.03	-.04	-.06
7/16 to 3/4" incl.	-.03	-.06	-.08
7/8 to 1" incl.	-.05	-.10	-.14

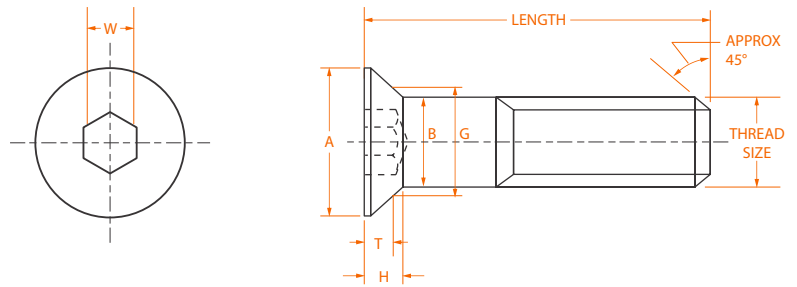
### Application Data

Thread size nom.	Maximum Tightening Torques			
	Unplated		Plated	
	UNC	UNF	UNC	UNF
#0	-	1.6	-	1.2
#1	2.6	2.9	1.9	2.1
#2	4.4	4.8	3.3	3.6
#3	6.7	8.5	5.0	6.3
#4	8.9	10.0	6.6	7.5
#5	13.0	14.0	9.0	10.0
#6	16.0	19.0	12.0	14.0
#8	30.0	32.0	22.0	24.0
#10	44.0	51.0	33.0	38.0
1/4	100.0	120.0	75.0	90.0
5/16	210.0	240.0	157.0	180.0
3/8	380.0	430.0	285.0	322.0
7/16	600.0	680.0	450.0	510.0
1/2	930.0	1,050.0	697.0	787.0
5/8	1,800.0	2,000.0	1,350.0	1,500.0
3/4	3,200.0	3,560.0	2,400.0	2,670.0
7/8	5,400.0	6,000.0	4,050.0	4,500.0
1	8,200.0	8,900.0	6,150.0	6,675.0

### Head Marking



Head markings may vary slightly depending on manufacturing practice. UNBRAKO, and UNB are recognized identifications for #10 diameter & larger.



### Product Dimensions

Thread size nom.	Thread per Inch		Head Diameter A		Hex Socket Size W nom.	Head Height H max ref.	Socket Depth T min.
	UNC	UNF	max*	min**			
#0	-	80	.138	.117	.035	.044	.025
#1	64	72	.168	.143	.050	.054	.031
#2	56	64	.197	.168	.050	.064	.038
#3	48	56	.226	.193	.0625	.073	.044
#4	40	48	.255	.218	.0625	.083	.055
#5	40	44	.281	.240	.0781	.090	.061
#6	32	40	.307	.263	.0781	.097	.066
#8	32	36	.359	.311	.0937	.112	.076
#10	24	32	.411	.359	.1250	.127	.087
1/4	20	28	.531	.480	.1562	.161	.111
5/16	18	24	.656	.600	.1875	.198	.135
3/8	16	24	.781	.720	.2187	.234	.159
7/16	14	20	.844	.781	.2500	.234	.159
1/2	13	20	.938	.872	.3125	.251	.172
5/8	11	18	1.188	1.112	.3750	.324	.220
3/4	10	16	1.438	1.355	.5000	.396	.220
7/8	9	14	1.688	1.604	.5625	.468	.248
1	8	12	1.938	1.841	.6250	.540	.297

\* maximum – to theoretical sharp corners  
\*\*minimum – absolute with A flat

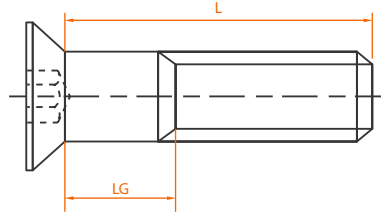
Thread size nom.	thd-to-hd max ref	Body Diameter B		Protrusion gage diameter G		Tensile Load lbf	
		max	min	max	min	UNC	UNF
#0	.500	.060	.0568	.078	.077	-	265
#1	.750	.073	.0695	.101	.100	390	390
#2	.750	.086	.0822	.124	.123	555	555
#3	.750	.099	.0949	.148	.147	725	725
#4	.875	.112	.1075	.172	.171	960	1,040
#5	.875	.125	.1202	.196	.195	1,260	1,310
#6	.875	.138	.1329	.220	.219	1,440	1,620
#8	1.000	.164	.1585	.267	.266	2,220	2,240
#10	1.250	.190	.1840	.313	.312	2,780	3,180
1/4	1.250	.250	.2435	.424	.423	5,070	5,790
5/16	1.500	.3125	.3053	.539	.538	8,350	9,250
3/8	1.750	.375	.3678	.653	.652	12,400	14,000
7/16	2.000	.4375	.4294	.690	.689	16,900	18,900
1/2	2.250	.500	.4919	.739	.738	22,800	25,600
5/8	2.500	.625	.6163	.962	.961	36,000	40,800
3/4	3.000	.750	.7406	1.186	1.185	53,200	59,300
7/8	3.250	.875	.8647	1.411	1.410	73,500	81,000
1	3.750	1.000	.9886	1.635	1.634	96,300	106,000

**GENERAL NOTE:** Flat, countersunk head cap screws and button head cap screws are designed and recommended for moderate fastening applications: machine guards, hinges, covers, etc. They are not suggested for use in critical high load strength applications where socket head cap screws should be used.

HIGH-GRADE ALLOY STEEL

## Maximum Lengths

- LG is the maximum grip length and is the distance from the bearing surface to the first complete thread.



Thread Size	Length 'L'																			
	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	
# 0	0.25	0.25	0.50	0.75																
# 1		0.25	0.25	0.62	0.88															
# 2		0.25	0.25	0.62	0.88	1.12														
# 3		0.25	0.25	0.62	0.88	1.12	1.38													
# 4				0.50	0.50	1.00	1.00	1.50												
# 5				0.50	0.50	1.00	1.00	1.50												
# 6				0.50	0.50	1.00	1.00	1.50	1.50	2.00										
# 8				0.38	0.38	0.88	0.88	1.38	1.38	1.88	1.88	2.38								
# 10					0.62	0.62	1.12	1.12	1.62	1.62	2.12	2.12	2.62	2.62	3.12					
1/4						0.75	0.75	1.25	1.25	1.75	1.75	2.25	2.25	2.75	2.75	3.25	3.25	3.75	3.75	
5/16							0.88	0.88	1.38	1.38	1.88	1.88	2.38	2.38	2.88	2.88	3.38	3.38	3.88	
3/8								1.00	1.00	1.50	1.50	2.00	2.00	2.50	2.50	3.00	3.00	3.50	3.50	
7/16									1.12	1.12	1.62	1.62	2.12	2.12	2.62	2.62	3.12	3.12	3.62	
1/2									1.00	1.00	1.00	1.75	1.75	1.75	2.50	2.50	2.50	3.25	3.25	
5/8											1.50	1.50	1.50	2.25	2.25	2.25	3.00	3.00		
3/4												1.50	1.50	1.50	1.50	2.50	2.50	2.50	2.50	
7/8													1.50	1.50	1.50	1.50	2.50	2.50		
1														1.50	1.50	1.50	1.50	2.50		