

Socket Head Cap Screws

Technical drawings and 3-D models available for items with this symbol. 

Flat-Head Socket Head Cap Screw Key Information and Head Dimensions

Screw Size	No. 0	No. 2	No. 3	No. 4	No. 5	No. 6	No. 8	No. 10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
Decimal	0.060"	0.086"	0.099"	0.112"	0.125"	0.138"	0.164"	0.190"	0.250"	0.3125"	0.375"	0.4375"	0.500"	0.625"	0.750"	1.00"
Hex Key Size	0.035"	0.050"	1/16"	1/16"	5/64"	5/64"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"	1/2"	5/8"
Head Ht.	0.044"	0.064"	0.073"	0.083"	0.090"	0.097"	0.112"	0.127"	0.161"	0.198"	0.234"	0.234"	0.251"	0.324"	0.396"	0.540"
Head Dia.	0.138"	0.197"	0.226"	0.255"	0.281"	0.307"	0.359"	0.411"	0.531"	0.656"	0.781"	0.844"	0.938"	1.188"	1.438"	1.938"

Flat-Head Socket Head Cap Screw Thread Length Information

Sizes marked with a † are always fully threaded. For all other **alloy steel** sizes, manufacturing standards allow thread length to vary between the minimum and maximum shown below; **Type 316** and **18-8 stainless steel** can vary between the minimum shown below and fully threaded.

Screw Size	No. 0	No. 2	No. 3	No. 4	No. 5	No. 6	No. 8	No. 10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
For Alloy Steel																
Min. Thread Lg.	Full	Full	Full	Full	Full	Full	7/8"	7/8"	1"	1 1/8"	1 1/4"	Full	1 1/2"	1 3/4"	2"	Full
Max. Thread Lg.	Full	Full	Full	Full	Full	Full	1 5/16"	1 3/8"	1 1/2"	1 11/16"	1 13/16"	Full	2 3/8"	2 3/4"	3"	Full
For Type 316 and 18-8 Stainless Steel																
Min. Thread Lg.	Full	3/4"	—	3/4"	Full	3/4"	7/8"	7/8"	1"	1 1/8"	1 1/4"	Full	1 1/2"	1 3/4"	1 3/4"	—

Alloy Steel Flat Head—Hex Socket



Fully Threaded †



Partially Threaded

A thinner countersunk head provides a flush mount. Head configuration is not recommended for use in high-strength applications where socket head cap screws should be used. Meet ASTM F835. Class 3A thread fit. Length is measured from top of head.

Black-oxide and **zinc-plated alloy steel** screw sizes through 1/2" have a Rockwell hardness of C39-C44 and minimum tensile strength of 144,000 psi; screw sizes larger than 1/2" have a Rockwell hardness of C37-C44 and minimum tensile strength of 135,000 psi. *Black-oxide alloy steel* offers mild rust resistance and has some lubrication qualities. *Zinc-plated* screws offer good rust resistance. **Self-locking black-oxide alloy steel** screws have a nylon patch bonded to the threads to hold them firmly and prevent them from loosening due to vibration. Black-oxide alloy steel offers mild rust resistance and has some lubrication qualities. Screws are reusable. Class 3A thread fit. Rockwell hardness: C39-C44. Minimum tensile strength is 145,000 psi. Nylon patch withstands temperatures up to 250° F.

Black-Oxide Alloy Steel

Lg.	Pkg. Qty.	Per Pkg.	Lg.	Pkg. Qty.	Per Pkg.	Lg.	Pkg. Qty.	Per Pkg.	Lg.	Pkg. Qty.	Per Pkg.
0-80			8-32 (Cont.)			1/4"-28			3/8"-16 (Cont.)		
1/8"	25	91253A029 † \$6.65	1 1/2"	25	91253A204 \$9.35	3/8"	50	91253A301 † \$6.93	4"	5	91253A644 \$7.43
1/4"	25	91253A031 † 6.70	1 3/4"	10	91253A206 5.30	1/2"	50	91253A303 † 6.92	4 1/2"	1	91253A646 6.25
3/8"	25	91253A035 † 8.98	2"	10	91253A209 7.50	5/8"	50	91253A305 † 7.12	5"	1	91253A648 7.81
2-56			8-36			3/4" 50 91253A307 † 7.41			6" 1 91253A652 8.06		
3/16"	25	91253A075 † 5.64	1 1/4"	5	91253A226 † 10.00	7/8" 25 91253A302 † 3.98			3/8"-24		
1/4"	25	91253A077 † 5.67	10-24			1" 25 91253A309 † 4.06			5/8" 25 91253A351 † 6.58		
3/8"	25	91253A079 † 5.10	1/4"	25	91253A238 † 5.09	1 1/4" 25 91253A311 † 6.62			3/4" 25 91253A353 † 6.67		
1/2"	25	91253A081 † 5.23	3/8"	100	91253A240 † 10.79	1 1/2" 25 91253A313 † 6.02			1" 25 91253A355 † 7.98		
5/8"	25	91253A083 † 5.33	7/16"	25	91253A241 † 4.74	1 3/4" 10 91253A317 5.22			1 1/4" 25 91253A357 † 8.45		
3-48			1/2"	100	91253A242 † 11.09	2" 10 91253A319 5.76			1 1/2" 25 91253A359 † 8.98		
1/4"	25	91253A092 † 5.60	5/8"	100	91253A244 † 11.75	2 1/2" 5 91253A322 5.09			1 3/4" 10 91253A361 † 8.80		

3/8" 25	91253A094†	5.64	3/4" 100	91253A245†	12.38	3" 1	91253A324	1.09	2" 10	91253A365†	8.95
1/2" 25	91253A096†	6.12	7/8" 50	91253A246†	10.98	5/16"-18			2 1/2" 1	91253A367	3.28
4-40			1" 100	91253A247†	13.74	1/2" 25	91253A578†	4.73	7/16"-14		
1/8" 25	91253A102†	10.63	1 1/4" 100	91253A249†	14.96	5/8" 25	91253A580†	4.76	3/4" 10	91253A667†	5.11
3/16" 50	91253A104†	5.75	1 1/2" 25	91253A251	6.66	3/4" 25	91253A581†	4.94	1" 10	91253A669†	5.46
1/4" 100	91253A106†	8.97	2" 10	91253A255	5.46	7/8" 25	91253A582†	6.74	1 1/4" 10	91253A671†	5.98
5/16" 100	91253A107†	8.26	2 1/2" 5	91253A257	4.38	1" 25	91253A583†	5.40	1 1/2" 10	91253A673†	6.11
3/8" 100	91253A108†	9.18	3" 5	91253A260	6.25	1 1/4" 25	91253A585†	6.03	1 3/4" 10	91253A675†	6.55
1/2" 100	91253A110†	9.66	10-32			1 1/2" 25	91253A587†	6.21	2" 10	91253A677†	7.67
5/8" 100	91253A112†	9.94	1/4" 50	91253A002†	7.31	1 3/4" 10	91253A589†	3.73	1/2"-13		
3/4" 100	91253A113†	10.41	3/8" 100	91253A001†	11.20	2" 10	91253A591	4.05	3/4" 10	91253A710†	6.10
1" 50	91253A115†	9.54	1/2" 100	91253A003†	12.35	2 1/4" 10	91253A592	4.24	1" 10	91253A712†	6.67
5-40			5/8" 100	91253A006†	12.30	2 1/2" 10	91253A593	3.84	1 1/4" 10	91253A714†	6.81
1/8" 10	91253A122†*	6.04	3/4" 100	91253A008†	13.38	3" 5	91253A595	8.03	1 1/2" 10	91253A716†	7.76
1/4" 100	91253A124†	7.98	7/8" 50	91253A009†	8.27	3 1/2" 5	91253A599	4.08	1 3/4" 10	91253A718†	8.27
3/8" 100	91253A126†	9.64	1" 50	91253A010†	10.91	4" 5	91253A601	4.96	2" 5	91253A720†	4.39
1/2" 100	91253A128†	10.03	1 1/4" 25	91253A012†	6.51	5/16"-24			2 1/4" 5	91253A721†	4.40
5/8" 100	91253A130†	10.61	1 1/2" 25	91253A014	7.38	1/2" 25	91253A331†	5.20	2 1/2" 5	91253A722	5.01
3/4" 100	91253A131†	10.85	2" 25	91253A018	9.37	5/8" 50	91253A332†	8.87	3" 5	91253A724	5.65
6-32			2 1/2" 5	91253A022†	4.62	3/4" 25	91253A333†	5.53	3 1/2" 5	91253A726	9.41
1/4" 100	91253A144†	9.18	3" 5	91253A024†	7.03	7/8" 10	91253A334†	3.12	4" 5	91253A728	11.28
5/16" 50	91253A145†	5.26	1/4"-20			1" 25	91253A335†	6.13	4 1/2" 5	91253A730	13.06
3/8" 100	91253A146†	9.69	3/8" 50	91253A535†	8.08	1 1/4" 25	91253A337†	6.70	5" 5	91253A732	14.82
1/2" 100	91253A148†	10.33	1/2" 50	91253A537†	8.16	1 1/2" 25	91253A339†	6.26	6" 1	91253A740	3.82
5/8" 100	91253A150†	10.36	5/8" 50	91253A539†	8.35	1 3/4" 10	91253A345†	4.68	1/2"-20		
3/4" 100	91253A151†	10.76	3/4" 50	91253A540†	8.54	3/8"-16			3/4" 10	91253A371†	6.49
1" 25	91253A153†	9.55	7/8" 50	91253A536†	12.93	1/2" 25	91253A619†	7.34	1" 10	91253A373†	5.65
6-40			1" 50	91253A542†	8.44	5/8" 25	91253A621†	5.85	1 1/4" 10	91253A375†	6.68
1/2" 25	91253A162†	5.97	1 1/4" 50	91253A544†	7.36	3/4" 25	91253A622†	6.73	1 1/2" 10	91253A377†	7.00
8-32			1 3/8" 10	91253A545†	7.50	7/8" 25	91253A623†	9.29	1 3/4" 5	91253A379†	3.76
1/4" 50	91253A189†	9.76	1 1/2" 25	91253A546†	5.27	1" 25	91253A624†	7.02	2" 5	91253A381†	4.16
5/16" 50	91253A190†	14.30	1 3/4" 25	91253A548	7.21	1 1/4" 25	91253A626†	7.04	3" 5	91253A389	7.59
3/8" 100	91253A192†	9.89	2" 25	91253A550	7.77	1 1/2" 25	91253A628†	7.44	5/8"-11		
7/16" 100	91253A193†	9.58	2 1/4" 10	91253A554	10.21	1 3/4" 25	91253A630†	7.72	1" 5	91253A794†	10.35
1/2" 100	91253A194†	10.00	2 1/2" 10	91253A556	11.67	2" 10	91253A632†	4.39	1 1/4" 5	91253A796†	6.58
5/8" 100	91253A196†	10.85	3" 5	91253A560	6.98	2 1/4" 10	91253A633	5.64	1 1/2" 5	91253A798†	6.38
3/4" 100	91253A197†	11.36	3 1/2" 5	91253A564	5.50	2 1/2" 10	91253A634	6.83	1 3/4" 5	91253A800†	6.70
7/8" 25	91253A198†	5.91	4" 1	91253A566	1.25	3" 10	91253A636	7.84	2" 5	91253A802†	7.00
1" 100	91253A199†	12.46				3 1/2" 5	91253A640	6.38	2 1/4" 5	91253A803†	7.98
1 1/4" 25	91253A201	8.33									

† Fully threaded. For all other sizes, manufacturing standards allow thread length to vary between the minimum and maximum as shown above. * Head is undercut; height is 70% of the standard head height to allow for more threading.

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