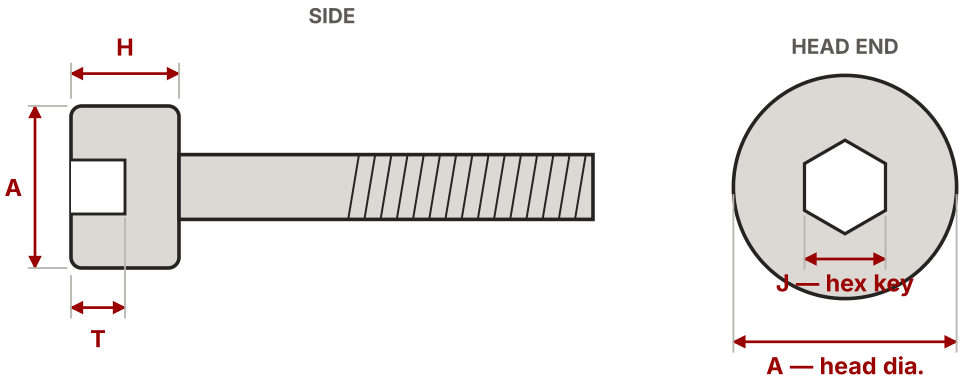
Socket Head Cap Screw Dimensions

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J & E Supply & FASTENER CO.

Head diameter, head height, hex key size and key depth for inch socket head cap screws, #0 to 2″. ASME B18.3.

The numbers behind a **socket head cap screw** (“Allen head”). **J** is the hex key (Allen wrench) that fits it; **A** is the room the round head needs, the counterbore it sits in; **H** is the head height — on a socket head it equals the screw’s own diameter; **T** is how deep the key goes in. Inches throughout.



Letters match the table. **J** hex key size, **A** head diameter, **H** head height, **T** key engagement depth (minimum).

Socket head cap screws — ASME B18.3 (inches)

SIZE	HEX KEY J	HEAD DIA. A MAX	A MIN	HEAD HEIGHT H MAX	H MIN	KEY DEPTH T MIN
#0	.050″	0.096	0.091	0.060	0.057	0.025
#1	1/16″	0.118	0.112	0.073	0.070	0.031
#2	5/64″	0.140	0.134	0.086	0.083	0.038
#3	5/64″	0.161	0.154	0.099	0.095	0.044
#4	3/32″	0.183	0.176	0.112	0.108	0.051
#5	3/32″	0.205	0.198	0.125	0.121	0.057
#6	7/64″	0.226	0.218	0.138	0.134	0.064
#8	9/64″	0.270	0.262	0.164	0.159	0.077
#10	5/32″	0.312	0.303	0.190	0.185	0.090
1/4″	3/16″	0.375	0.365	0.250	0.244	0.120
5/16″	1/4″	0.469	0.457	0.312	0.306	0.151
3/8″	5/16″	0.562	0.550	0.375	0.368	0.182
7/16″	3/8″	0.656	0.642	0.438	0.430	0.213
1/2″	3/8″	0.750	0.735	0.500	0.492	0.245
5/8″	1/2″	0.938	0.921	0.625	0.616	0.307
3/4″	5/8″	1.125	1.107	0.750	0.740	0.370
7/8″	3/4″	1.312	1.293	0.875	0.864	0.432
1″	3/4″	1.500	1.479	1.000	0.988	0.495
1-1/8″	7/8″	1.688	1.665	1.125	1.111	0.557
1-1/4″	7/8″	1.875	1.852	1.250	1.236	0.620

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SIZE	HEX KEY J	HEAD DIA. A MAX	A MIN	HEAD HEIGHT H MAX	H MIN	KEY DEPTH T MIN
1-3/8″	1″	2.062	2.038	1.375	1.360	0.682
1-1/2″	1″	2.250	2.224	1.500	1.485	0.745
1-3/4″	1-1/4″	2.625	2.597	1.750	1.734	0.870
2″	1-1/2″	3.000	2.970	2.000	1.983	0.995

Thread sizes and pitches are on the thread pitch chart.

Strength: this chart is size only. Alloy-steel socket head cap screws are made to ASTM A574 → — proof and tensile strength, and the minimum loads for each size, are on that page. Stainless socket heads are not A574.

Quick answers

What size Allen wrench fits a 1/4" socket head cap screw?

A **3/16″** hex key (Allen wrench).

What hex key goes with each socket head cap screw size?

#0 – .050″, #1 – 1/16″, #2 – 5/64″, #3 – 5/64″, #4 – 3/32″, #5 – 3/32″, #6 – 7/64″, #8 – 9/64″, #10 – 5/32″, 1/4″ – 3/16″, 5/16″ – 1/4″, 3/8″ – 5/16″, 7/16″ – 3/8″, 1/2″ – 3/8″, 5/8″ – 1/2″, 3/4″ – 5/8″, 7/8″ – 3/4″, 1″ – 3/4″, 1-1/8″ – 7/8″, 1-1/4″ – 7/8″, 1-3/8″ – 1″, 1-1/2″ – 1″, 1-3/4″ – 1-1/4″, 2″ – 1-1/2″.

How tall is the head on a socket head cap screw?

The head height equals the screw's diameter — a 3/8″ socket head cap screw has a head 0.375″ tall and 0.562″ across.

How deep does the hex key go into a socket head cap screw?

At least 0.120″ on a 1/4″, 0.245″ on a 1/2″ and 0.495″ on a 1″ (key engagement T, minimum).

Reference values drawn from the governing standards. For critical applications, confirm against the standard and the manufacturer's published data. Technical information disclaimer →