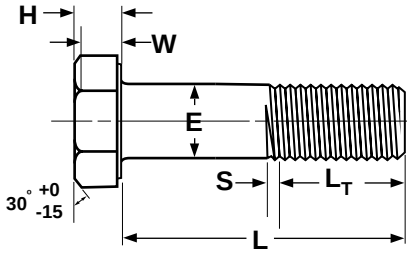
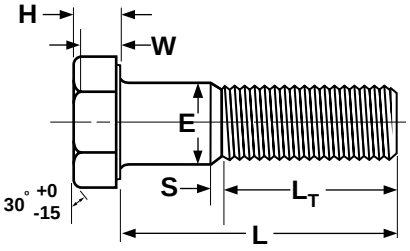
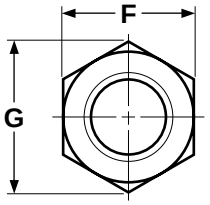
Heavy Hex Cap Screws



Cut Thread



Rolled Thread



UNDERSIDE OF HEAD

HEAVY HEX CAP SCREWS

ASME B18.2.1-1996

Nominal Size or Basic Product Diameter		E		F		G		H		W	L_T		S
		Body Diameter		Width Across Flats		Width Across Corners		Head Height		Wrenching Height	Thread Length for Screw Lengths		Transition Thread Length
											6 in. and shorter	Over 6 in.	
		Max	Min	Max	Min	Max	Min	Max	Min	Min	Basic	Basic	Max
1/2	0.5000	0.5000	0.482	0.875	0.850	1.010	0.969	0.323	0.302	0.215	1.250	1.500	0.385
5/8	0.6250	0.6250	0.605	1.062	1.031	1.227	1.175	0.403	0.378	0.269	1.500	1.750	0.455
3/4	0.7500	0.7500	0.729	1.250	1.212	1.443	1.383	0.483	0.455	0.324	1.750	2.000	0.500
7/8	0.8750	0.8750	0.852	1.438	1.394	1.660	1.589	0.563	0.531	0.378	2.000	2.250	0.556
1	1.0000	1.0000	0.976	1.625	1.575	1.876	1.796	0.627	0.591	0.416	2.250	2.500	0.625
1 1/8	1.1250	1.1250	1.098	1.812	1.756	2.093	2.002	0.718	0.658	0.461	2.500	2.750	0.714
1 1/4	1.2500	1.2500	1.223	2.000	1.938	2.309	2.209	0.813	0.749	0.530	2.750	3.000	0.714
1 3/8	1.3750	1.3750	1.345	2.188	2.119	2.526	2.416	0.878	0.810	0.569	3.000	3.250	0.833
1 1/2	1.5000	1.5000	1.470	2.375	2.300	2.742	2.622	0.974	0.902	0.640	3.250	3.500	0.833
1 3/4	1.7500	1.7500	1.716	2.750	2.662	3.175	3.035	1.134	1.054	0.748	3.750	4.000	1.000
2	2.0000	2.0000	1.964	3.125	3.025	3.608	3.449	1.263	1.175	0.825	4.250	4.500	1.111
2 1/4	2.2500	2.2500	2.214	3.500	3.388	4.041	3.862	1.423	1.327	0.933	...	5.000	1.111
2 1/2	2.5000	2.5000	2.461	3.875	3.750	4.474	4.275	1.583	1.479	1.042	...	5.500	1.250
2 3/4	2.7500	2.7500	2.711	4.250	4.112	4.907	4.688	1.744	1.632	1.151	...	6.000	1.250
3	3.0000	3.0000	2.961	4.625	4.475	5.340	5.102	1.935	1.815	1.290	...	6.500	1.250

Tolerance on Length	Nominal Screw Size	Nominal Screw Length									
		Up to 1 in., incl.		Over 1 in. to 2 1/2 in., incl.		Over 2 1/2 in. to 4 in., incl.		Over 4 in. to 6 in., incl.		Longer than 6 in.	
	1/4 to 3/8	+0.02	-0.03	+0.02	-0.04	+0.04	-0.06	+0.06	-0.10	+0.10	-0.18
	7/16 and 1/2	+0.02	-0.03	+0.04	-0.06	+0.06	-0.08	+0.08	-0.10	+0.12	-0.18
	9/16 to 3/4	+0.02	-0.03	+0.06	-0.08	+0.08	-0.10	+0.10	-0.10	+0.14	-0.18
	7/8 and 1	....	....	+0.08	-0.10	+0.10	-0.14	+0.12	-0.16	+0.16	-0.20
	1 1/8 to 1 1/2	....	....	+0.12	-0.12	+0.16	-0.16	+0.18	-0.18	+0.22	-0.22

Description	A low carbon steel hex cap screw with a wider head than that of a standard hex cap screw.
Applications/ Advantages	Offers greater wrenching area than standard hex cap screws and more consistent body diameter dimensions than heavy hex bolts (the following specifications pertain to Grade-2 heavy hex cap screws; performance requirements for grades 5 & 8 are on page 63).
Material	Grade-2 heavy hex cap screws shall be made from a carbon steel which conforms to the following chemical composition requirements-- *Carbon*: 0.55% maximum; *Phosphorus:* 0.048% maximum; *Sulfur:* 0.058% maximum
Hardness*	Rockwell B80 - 100
Tensile Strength	74,000 psi. minimum
Proof Load	55,000 psi.
Elongation in 2 in.	18% minimum
Plating	See Appendix-A for plating information.

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