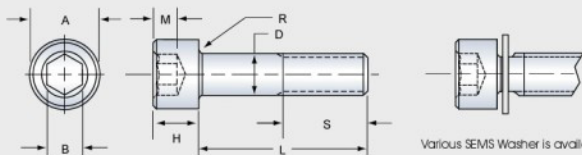


- Dimensions
- Mechanical Properties
- Application Data

VFS

ASME B18.3 : Hexagon Socket Head Cap Screws



Dimensions (inch)

Various SEMS Washer is available.

Nom. Size	A	H	D	B nom.	M min.	R min.	S min.	R. S. Torque (in-lb)
#0	0.091 - 0.096	0.057 - 0.060	0.0568 - 0.0600	0.050	0.025	0.002	0.50	2.26
#1	0.112 - 0.118	0.070 - 0.073	0.0695 - 0.0730	1/16	0.062	0.031	0.003	4.01
#2	0.134 - 0.140	0.083 - 0.086	0.0822 - 0.0860	5/64	0.078	0.038	0.003	6.65
#3	0.154 - 0.161	0.095 - 0.099	0.0949 - 0.0990	5/64	0.078	0.044	0.004	10.1
#4	0.176 - 0.183	0.108 - 0.112	0.1075 - 0.1120	3/32	0.094	0.051	0.004	14.1
#5	0.198 - 0.205	0.121 - 0.125	0.1202 - 0.1250	3/32	0.094	0.057	0.005	20.8
#6	0.218 - 0.226	0.134 - 0.138	0.1329 - 0.1380	7/64	0.109	0.064	0.005	26.2
#8	0.262 - 0.270	0.159 - 0.164	0.1585 - 0.1640	9/64	0.141	0.077	0.006	48.0
#10	0.303 - 0.312	0.185 - 0.190	0.1840 - 0.1900	5/32	0.156	0.090	0.006	69.5
#12	0.314 - 0.324	0.210 - 0.216	0.2095 - 0.2160	5/32	0.156	0.103	0.007	109
1/4	0.365 - 0.375	0.244 - 0.250	0.2435 - 0.2500	3/16	0.188	0.120	0.007	166
5/16	0.457 - 0.469	0.306 - 0.312	0.3053 - 0.3125	1/4	0.250	0.151	0.009	342
3/8	0.550 - 0.562	0.368 - 0.375	0.3678 - 0.3750	5/16	0.312	0.182	0.012	608
7/16	0.642 - 0.656	0.430 - 0.438	0.4294 - 0.4375	3/8	0.375	0.213	0.014	973
1/2	0.735 - 0.750	0.492 - 0.500	0.4919 - 0.5000	3/8	0.375	0.245	0.016	1484
9/16	0.827 - 0.843	0.554 - 0.562	0.5538 - 0.5625	7/16	0.438	0.276	0.021	2140
5/8	0.921 - 0.938	0.616 - 0.625	0.6163 - 0.6250	1/2	0.500	0.307	0.021	2792
3/4	1.107 - 1.125	0.740 - 0.750	0.7406 - 0.7500	5/8	0.625	0.370	0.025	4952
7/8	1.293 - 1.312	0.864 - 0.875	0.8647 - 0.8750	3/4	0.750	0.432	0.031	7991
1*	1.479 - 1.500	0.988 - 1.000	0.9886 - 1.0000	3/4	0.750	0.495	0.034	11979
1-1/8	1.665 - 1.688	1.111 - 1.125	1.1086 - 1.1250	7/8	0.875	0.557	0.039	16968
1-1/4	1.852 - 1.875	1.236 - 1.250	1.2336 - 1.2500	7/8	0.875	0.620	0.044	23944
1-3/8	2.038 - 2.062	1.360 - 1.375	1.3568 - 1.3750	1*	1.000	0.682	0.048	31394
1-1/2	2.224 - 2.250	1.485 - 1.500	1.4818 - 1.5000	1*	1.000	0.745	0.052	41661

Notes:

- Thread Class : 3A UNRC and UNRF Series for screw size #0 through 1"; 2A UNRC and UNRF Series for screw size over 1".
- Length Tolerance : See Table 1.
- R. S. Torque = Recommended Seating Torque.
- Working Temperature : -50°C ~ +300°C.

Mechanical Properties

Nom. Size, D	D ≤ 1/2	D > 1/2
Hardness (HRC)	39-45	37-45
Tensile Strength (psi)	180,000 min.	170,000 min.
Yield Strength at 0.2% Offset (psi)	153,000 min.	153,000 min.
Elongation (%)	10 min.	10 min.
Decarburization and Carburization (See Page 34)	E = 3/4H1	E = 3/4H1

Table 1 Length Tolerance

Nom. Length	Nom. Size, Tolerances on Length			
	#0 Thru 3/8, incl.	7/16 Thru 3/4, incl.	7/8 Thru 1-1/2, incl.	Over 1-1/2
Up to 1.00, incl.	-0.03	-0.03	-0.05	
Over 1.00 to 2.50, incl.	-0.04	-0.06	-0.10	-0.18
Over 2.50 to 6.00, incl.	-0.06	-0.08	-0.14	-0.20
Over 6.00	-0.12	-0.12	-0.20	-0.24

Typical Application Fixture

Socket head cap screws are designed to be used with the head protruding or counter bored. They should be used where high strength and ease of installation are required.

